Appendix A
Notice of Preparation

SA Recycling Amendment To Permit No. 750 Project Initial Study/ Notice of Preparation

APP#190916-128
State Clearing House #93071074

Prepared for:

Environmental Management Division
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THE PORT
OF LOS ANGELES

Table of Contents

1.0 Project Overview and Background 1
1.1 Project Overview 1
1.2 Background and Previous Environmental Documentation 2
1.3 Purpose and Use of a Subsequent EIR 4
2.0 Project Description 6
2.1 Project Objectives 6
2.2 Project Location 6
2.3 Environmental Setting 11
3.0 Anticipated Project Approvals and Permits… 25
4.0 Environmental Checklist – Initial Study… 26
Environmental Factors Potentially Affected 28
Determination 28
Evaluation of Environmental Impacts 29
4.1 Aesthetics 30
4.2 Agricultural and Forestry Resources 33
4.3 Air Quality 36
4.4 Biological Resources 42
4.5 Cultural Resources 45
4.6 Energy 47
4.7 Geology and Soils 50
4.8 Greenhouse Gas Emissions 55
4.9 Hazards and Hazardous Materials 57
4.10 Hydrology and Water Quality 64
4.11 Land Use and Planning 70
4.12 Mineral Resources 72
4.13 Noise and Vibration 74
4.14 Population and Housing 76
4.15 Public Services 78
4.16 Recreation 81
4.17 Transportation 83
4.18 Tribal Cultural Resources 87
4.19 Utilities and Service Systems 89
4.20 Wildfire 93
4.21 Mandatory Findings of Significance 95
5.0 References… 97

Tables

Table 1 ..... 1996 Approved Project as Compared to Fiscal Year 2021/2022 Operations.....23
Table 2 ..... 1996 Approved Project Total Emission……36

Figures

Figure 1 Regional Location 7
Figure 2 Local Vicinity 9
Figure 3 Aerial Photograph 15
Figure 4 Dust Control and Noise Suppression Site Plan.....17

ACRONYMS AND ABBREVIATIONS

APCS	air pollution control system
APCE	air pollution control equipment
APP	Application for Port Permit
Approved Project	1996 approved project
BACT	best available control technology
Board	Board of Harbor Commissioners
CAO	Corrective Action Order
CCR	California Code of Regulations
CCC	California Coastal Commission
CEQA	California Environmental Quality Act
CFC	Chlorofluorocarbons
CO	Carbon Monoxide
DTSC	Department of Toxic Substances Control
EIR	Environmental Impact Report
FAR	Floor to Area Ratio
FY	fiscal year
IS	Initial Study
IS/NOP	Initial Study/Notice of Preparation
LNAPL	light non-aqueous phase liquid
LAHD	Los Angeles Harbor Department
LARWQCB	Los Angeles Regional Water Quality Control Board
MMRP	Mitigation Monitoring and Reporting Program
MRP	Monitoring and Reporting Program
MT	Metric Ton
NOP	Notice of Preparation
NO_x	Nitic Oxide
OPP	Official Policy/Procedure
PAHs	polycyclic aromatic hydrocarbons
PCBs	polychlorinated biphenyls
PMP	Port Master Plan
POLA	Port of Los Angeles
Port	Port of Los Angeles
PRC	Public Resources Code
proposed Project	SA Recycling Amendment to Permit No. 750 Project
RTO	regenerative thermal oxidizer
SCAQMD	South Coast Air Quality Management District
SEIR	Subsequent Environmental Impact Report
SCH	State Clearinghouse
SWRCB	State Water Resources Control Board
SWPPP	Stormwater Pollution Prevention Plan
VOC	Volatile Organic Compound
ZIMAS	Zoning Information and Map Access System
WDRs	Waste Discharge Requirements

1.0 Project Overview and Background

1.1 Project Overview

The Los Angeles Harbor Department (LAHD), as the lead agency under the California Environmental Quality Act (CEQA), has prepared this Notice of Preparation (NOP) to inform responsible and trustee agencies, public agencies, and the public that a Subsequent Environmental Impact Report (SEIR) to the Hugo Neu-Proler Lease Renewal Environmental Impact Report (Certified EIR), which was certified in 1996 (State Clearing House (SCH) # 93071074), is being prepared for the proposed SA Recycling Amendment to Permit No. 750 Project (proposed Project). SA Recycling is seeking a 10-year extension to Permit No. 750 without any changes in the use or scope of operations approved under the existing permit that was evaluated in the Certified EIR.

Enacted in 1970, CEQA (Public Resources Code [PRC] Section 21000, *et seq*.) and its implementing guidelines (State CEQA Guidelines, Title 14 California Code of Regulations [CCR] Section 15000, *et seq*. [CEQA Guidelines]) require that all state and local government agencies consider the reasonably foreseeable and potentially significant adverse environmental consequences of projects over which they have discretionary authority prior to taking action on those projects. As authorized by Section 15050 of the State CEQA Guidelines, LAHD will serve as the lead agency for the subsequent environmental impact report. Through this notice, the LAHD hereby solicits guidance from all interested responsible, trustee and federal agencies as to the scope and content of the environmental information to be included in the SEIR.

A modified Initial Study (IS) Checklist, prepared pursuant to PRC Section 21166 and CEQA Guidelines Section 15162, is included with this NOP as Attachment A. The IS reflects consideration of the applicable subsequent environmental review provisions of CEQA as well as the *Los Angeles CEQA Thresholds Guide: Your Resource for Preparing CEQA Analyses in Los Angeles.* The IS, for example, briefly explains the substantial changes that have occurred with respect to the circumstances under which the proposed Project will be undertaken and the new potentially significant adverse effects that could result from the proposed Project, including the potential for a substantial increase in the severity of previously identified significant air quality effects (see Pub. Resources Code, Section 21166; CEQA Guidelines, Section 15162).

LAHD renewed the existing lease (Hugo Neu-Proler Permit No. 750) when the Certified EIR was approved by LAHD in 1996. Since that time, the joint venture of SA Recycling LLC (SA Recycling or Applicant) has been operating a scrap metal recycling site at the proposed Project site under Permit No. 750. Scrap metal is transported to the proposed Project site where it is sorted, shredded or sheared, then stockpiled and loaded for transport to domestic and overseas markets. The proposed Project includes an amendment to the existing permit to allow a 10-year extension with no changes to the infrastructure or operations that were occurring in fiscal year 2021/22 under Permit No. 750.

As lead agency under CEQA, LAHD is required to evaluate any new potentially significant adverse impacts of the proposed Project, from those previously identified in the 1996 Certified EIR, as well as the substantial increase(s) in severity of any previously identified significant adverse effects (CEQA Guidelines, Section 15162). As mentioned above, the Applicant's substantiated Fiscal Year 2021/2022 level of operations will conservatively serve as the

"baseline" for the environmental impact analysis of the proposed Project in the SEIR. The proposed Project analyzed in this SEIR will not increase maximum operations beyond what was previously contemplated in the 1996 Certified EIR (1.3 million gross tons of throughput).

The proposed Project includes the continued implementation of all previously adopted, and remaining applicable, mitigation measures governing the site's operations. These mitigation measures that remain applicable to the proposed Project will be modified as part of an updated mitigation monitoring program (MMRP), as necessary, contained within the Subsequent EIR. Please refer to Section 2.3.2, Current Operations, for a discussion of the current operations leading up to preparation of the NOP and IS, as compared to the previously contemplated maximum operations contained in the 1996 Certified EIR.

1.2 Background and Previous Environmental Documentation

Background

The proposed Project site consists of approximately 26.7 acres of waterfront and backland property at Berths 210 and 211 on Terminal Island at Port of Los Angeles (POLA). Prior to 1962, the proposed Project site was used for constructing and dismantling ships. In 1962, Hugo Neu-Proler Company began operating a scrap-metal recycling site. In 1996, POLA approved Permit No. 750 with the Hugo Neu-Proler Company along with the Certified EIR. Sims Group Ltd acquired substantially all of the recycling operations of Hugo Neu-Proler on October 31, 2005. In December 2005, the new company applied for a subsidiary name change to Sims Hugo Neu West. On September 1, 2007, the Sims Group and Adams Steel formed a joint venture creating SA Recycling LLC (Applicant). SA Recycling has continued operating a scrap metal recycling site at the proposed Project site under Permit No. 750. On August 7, 2010, POLA approved an assignment of Permit No. 750 from Sims Hugo Neu West to SA Recycling LLC (Order 69250).

Previous Environmental Documentation

Hugo Neu-Proler Lease Renewal Project EIR, 1996

In 1996, LAHD certified the EIR for the Hugo Neu-Proler Lease Renewal Project (SCH No. 93071074). The primary objective of the Certified EIR was a permit renewal extending through 2024. In addition to the renewal of the permit and continuation of current operations, project objectives included remediation of soil and groundwater contamination at the Project site, upgrade or replacement of on-site facilities and equipment, and addition of new facilities and equipment to the operation. The project approved in the 1996 Certified EIR contemplated a maximum operation of up to 1.3 million gross tons of throughput and included the following components:

New facilities and equipment:

1. Rail trackage and associated structures to allow reintroduction of rail service to the site.
2. Landscaped, 4,000-square-foot, single-story office building and parking area at the south end of the site.

SOURCE: ESRI 2020

FIGURE 1

Regional Location

SA Recycling Lease Extension Project EIR Addendum

DUDEK

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SOURCE: ESRI 2020

FIGURE 2

Local Vicinity

SA Recycling Lease Extension Project EIR Addendum

DUDEK

3.0 Anticipated Project Approvals and Permits

The approvals or permits that could be required for the proposed Project are anticipated to include, but not be limited, to:

- LAHD: Amendment to Permit No. 750 (as necessary)

4.0 Environmental Checklist – Initial Study

1.	**Project Title:**	SA Recycling Amendment to Permit No. 750 Project
2.	**Lead Agency Name and Address:**	Los Angeles Harbor Department Environmental Management Division 425 S. Palos Verdes Street San Pedro, CA 90731
3.	**Contact Person and Phone Number:**	Nicole Enciso 310.732.3615
4.	**Project Location:**	Port of Los Angeles, Berths 210 and 211 901 New Dock Street San Pedro, CA 90731
5.	**Project Sponsor's Name and Address:**	SA Recycling 901 New Dock Street San Pedro, CA 90731
6.	**General Plan Designation:**	General/Bulk Cargo (Non-Hazardous Industrial and Commercial)
7.	**Zoning:**	[Q]M3-1, Qualified Heavy Industrial with Height District 1

8. **Description of Project:**

LAHD is proposing an amendment to allow for a 10-year extension of the existing Permit No. 750, which currently expires in 2024. No changes to the scope of the permit, use of the proposed Project site, nor new construction or operational changes or increases are proposed, other than routine maintenance or replacement of equipment. The existing and ongoing monitoring and reporting of groundwater and free product recovery of the 1988 diesel fuel release would continue, and no changes are proposed.

9. **Surrounding Land Uses and Setting:**

The proposed Project site is located at Berths 210 and 211 at the POLA at 901 New Dock Street on Terminal Island. The proposed Project site is bounded by a channel within POLA to the north, shipping container terminals to the east and

west, and New Dock Street and railroad right-of-way to the south.

The proposed Project site is approximately one-quarter mile north of State Route 47 (Seaside Freeway), about 2 miles east of Interstate 110, and approximately 1.3 miles west of Interstate 710 (segment on Terminal Island). See Figure 2, Local Vicinity. Vehicle access to the proposed Project site is provided from New Dock Street and Pier S Avenue. Regional vehicular access is provided from State Route 47, Interstate 710, Interstate 110, and State Route 103. Marine vessels access the proposed Project site via channels in POLA. A railway along New Dock Street provides rail access to the proposed Project site.

10. Other Public Agencies Whose Approval May be Required for Operations at the Site:

- SCAQMD: permits for on-site stationary equipment
- State Water Resources Control Board: approval of Construction General Permit

11. Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code Section 21080.3.1? If so, has consultation begun?

Note: Conducting consultation early in the CEQA process allows tribal governments, lead agencies, and project proponents to discuss the level of environmental review, identify and address potential adverse impacts on tribal cultural resources, and reduce the potential for delay and conflict in the environmental review process (see PRC Section 21083.3.2.). Information may also be available from the California Native American Heritage Commission's Sacred Lands File per PRC Section 5097.96 and the California Historical Resources Information System administered by the California Office of Historic Preservation. Please also note that PRC Section 21082.3(c) contains provisions specific to confidentiality.

LAHD sent certified AB 52 letters on November 25, 2019, to the Gabrieleno Band of Mission Indians-Kizh Nation, Gabrieleno/Tongva San Gabriel Band of Mission Indians, Gabrielino/Tongva Nation, Gabrielino Tongva Indians of California Tribal Council, Gabrielino-Tongva Tribe, and Gabrielino-Tongva Tribe. No responses were received within the 30-day consultation request period. Consultation pursuant to AB 52 is therefore not required for this proposed Project.

Environmental Factors Potentially Affected

The environmental factors checked below could be affected by this proposed Project (i.e., the proposed Project would involve at least one impact that is a "Potentially Significant Impact"), as indicated by the checklist on the following pages.

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

Determination

On the basis of this initial evaluation:

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

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

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

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

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

Signature

03/28/2023
Date

Chris Cannon, Director
Environmental Management
Division
City of Los Angeles Harbor Department

Evaluation of Environmental Impacts

1. A brief explanation is required for all answers, except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained if it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
2. All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
3. Once the lead agency has determined that a particular physical impact may occur, the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.
4. "Negative Declaration: Less than Significant with Mitigation Incorporated" applies when the incorporation of mitigation measures has reduced an effect from a "Potentially Significant Impact" to a "Less-than-Significant Impact." The lead agency must describe the mitigation measures and briefly explain how they reduce the effect to a less-than-significant level. (Mitigation measures from Earlier Analyses, as described in #5, below, may be cross referenced.)
5. Earlier analyses may be used if, pursuant to tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration (Section 15063(c)(3)(D)). In this case, a brief discussion should identify the following:
   a. Earlier Analysis Used. Identify and state where earlier analyses are available for review.
   b. Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards and state whether such effects were addressed by mitigation measures, based on the earlier analysis.
   c. Mitigation Measures. For effects that are "Less than Significant with Mitigation Incorporated," describe the mitigation measures that were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.
6. Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, when appropriate, include a reference to the page or pages where the statement is substantiated.
7. Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.
8. This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.
9. The explanation of each issue should identify:
   a. The significance criteria or threshold, if any, used to evaluate each question; and
   b. The mitigation measure identified, if any, to reduce the impact to a less-than-significant level.

4.1 Aesthetics (Previously Referred to a Visual Resources (Aesthetics/Light and Glare))

4.1.1 Summary of Impacts Identified in the 1996 Certified EIR

The Visual Resources chapter of the 1996 Certified EIR determined that construction activities of the Approved Project would be short term, and views of the Project site would not create significant impacts. During operation, the proposed site modifications would occur within the existing site. Several features of the site were considered visually prominent, including wharf frontage and ships, scrap metal piles, bulk loader, large crane, and small cranes and mobile equipment. The wharf frontage, ships, large crane, and bulk loader would be similar to the industrial facilities and equipment adjacent to the Project site. Unlike the dockside equipment and scrap metal piles, the other site facilities, including office, warehouse buildings, shredder, and weigh station, were mostly hidden by the scrap piles and would not contribute to the visual impression of the site. Features of the Approved Project, including perimeter wall and landscaped single-story office building and parking area, would block and soften the visual appearance of the Project site. Operation of the Approved Project would not have a significant effect on visual resources. The Certified EIR determined that, considering the location of the marina—which was dominated by view of Port industrial facilities, ship loading equipment, or oil production facilities—the visual impacts of the Approved Project were not considered significant. The Certified EIR found that implementation of the Approved Project would not result in any significant adverse impacts to the visual resources of the project area. No mitigation measures were required. Additionally, cumulative aesthetics impacts relative to the Approved Project were determined to be insignificant.

4.1.2 Impacts Associated with the Proposed Project

Environmental Issues	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than Significant Impact	No Impact
Except as provided in Public Resources Code Section 21099, would the project a. Have a substantial adverse effect on a scenic resource			X	
b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?			X	
c. In nonurbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?			X	
d. Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?			X	

Discussion

Would the project:

a. *Have a substantial adverse effect on a scenic vista?*

Less Than Significant Impact. The proposed Project proposes an amendment to allow for a 10-year extension of the existing Permit No. 750 from 2024 to 2034. The proposed Project would not result in physical changes to the proposed Project site nor increase marine vessel trips. The proposed Project site is also not within or near any protected or designated scenic vistas. Therefore, it would not have any impact on scenic vistas and the current views of the site would remain for an additional 10 years minimum, unless the lease was extended again in the future. No significant new impact or substantial increase in the severity of a previously described impact would occur. Therefore, this issue will not be addressed further in the SEIR.

b. *Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings along a scenic highway?*

Less Than Significant Impact. The proposed Project site is not in the vicinity of an eligible or designated scenic highway. The California Department of Transportation is responsible for official nomination and designation of eligible scenic highways. The nearest officially designated State Scenic Highway is approximately 6.7 miles east of the proposed Project (State Route 1 between Route 19 in Long Beach south to Interstate 5 in San Juan Capistrano (Caltrans 2019)). The proposed Project site is not visible from this location; therefore, the proposed Project activities would not affect the quality of scenic views from this location.

The proposed Project proposes an amendment allowing for a 10-year extension of an existing permit. No scenic trees or rock outcroppings exist at the proposed Project site. Operational activities proposed at the proposed Project site would be consistent with the existing visual context of a working port. Therefore, there would be no impacts on scenic resources, including trees, rock outcroppings, or historic buildings. A less than significant impact would occur and no significant new impact or substantial increase in the severity of a previously described impact would occur. As such, and this issue will not be addressed further in the SEIR.

c. *In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?*

Less-than-Significant Impact. The proposed Project site is at the Port of Los Angeles in the City of Los Angeles, an urbanized area. The proposed Project proposes an amendment allowing for the continued operation of an existing scrap metal recycling site for 10 years. The proposed Project does not require any additional construction nor does it expand the processing capacity of the project approved in 1996. Permitting the

proposed Project would not conflict with applicable zoning or other regulations governing scenic quality. The proposed Project site is zoned qualified heavy industrial (Heavy Industrial with Height District 1 ({Q]M3-1) and has a General Plan Land use designation of General/Bulk Cargo (Non-Hazardous Industrial and Commercial) (Los Angeles 2020). The proposed Project site is in Planning Area 3 of the Los Angeles Master Plan, which designates the proposed Project site as "Mixed Land Use: [B210-B211] Container/Dry Bulk." The proposed Project would allow existing operations to continue at the proposed Project site for an additional 10 years. The proposed Project would not conflict with applicable zoning and other regulations governing scenic quality. The proposed Project's operation would maintain existing views and building heights and would adhere to the existing scale of development in the area. Therefore, impacts would be less than significant, and no significant new impact or substantial increase in the severity of a previously described impact would occur. As such, this issue will not be addressed further in the SEIR.

d. Create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area?

Less-than-Significant Impact. The proposed Project would not cause any significant impact to visual resources in the area with regard to light and glare. The proposed Project would not add a new source of light or glare as the existing operations would continue for an additional 10 years. The proposed Project would not adversely affect day or nighttime views and a less than significant impact would occur. In addition, no significant new impact or substantial increase in the severity of a previously described impact would occur. Therefore, this issue will not be addressed further in the SEIR.

4.2 Agricultural and Forestry Resources

4.2.1 Summary of Impacts Identified in the Certified EIR

The Certified EIR did not evaluate agriculture and forestry resources.

4.2.2 Impacts Associated with the Proposed Project

Environmental Issues	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than Significant Impact	No Impact
a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?				X
b. Conflict with existing zoning for agricultural use or conflict with a Williamson Act contract?				X
c. Conflict with existing zoning for, or cause rezoning of forestland (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?				X
d. Result in the loss of forestland or conversion of forestland to non-forest use?				X
e. Involve other changes in the existing environment that, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forestland to non-forest use?				X

Discussion

Would the project:

a. *Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?*

No Impact. The California Department of Conservation's Farmland Mapping and Monitoring Program (DOC 2011) develops maps and statistical data for analyzing impacts on California's agricultural resources. The Farmland Mapping and Monitoring Program categorizes agricultural land according to soil quality and irrigation status; the best land is identified as Prime Farmland. According to the Farmland Mapping and Monitoring Program, the proposed Project site is an area that has been designated as "Urban and Built-Up Land," which is defined as land with structures that have a variety of uses, including industrial, commercial, institutional, and railroad or other transportation uses (DOC 2018). There is no Prime Farmland, Unique Farmland, Farmland of

Statewide Importance, or Farmland of Local Importance in the proposed Project vicinity or on the proposed Project site. The proposed Project site operates as a scrap metal recycling site, and no agricultural uses exist on site. Therefore, the proposed Project would not convert Prime Farmland, Unique Farmland, Farmland of Statewide Importance, or Farmland of Local Importance to nonagricultural use. No significant new impact or substantial increase in the severity of a previously described impact would occur. Consequently, this issue will not be addressed further in the SEIR.

b. Conflict with existing zoning for agricultural use or conflict with a Williamson Act contract?

No Impact. The proposed Project site is zoned for heavy industrial uses ([Q]M3-1). There are no agricultural zoning designations or agricultural uses within the proposed Project limits or adjacent areas. The Williamson Act applies to parcels with at least 20 acres of Prime Farmland or at least 40 acres of land that is not designated as Prime Farmland.

The proposed Project site is not within a Prime Farmland designation and does not consist of more than 40 acres of farmland (DOC 2018). No Williamson Act contracts apply to the proposed Project site. As such, the proposed Project would not conflict with existing zoning for agricultural use or a Williamson Act contract. Therefore, no impacts would occur and there would be no significant new impact or substantial increase in the severity of a previously described impact. This issue will not be addressed further in the SEIR.

c. Conflict with existing zoning for, or cause rezoning of forestland (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?

No Impact. The proposed Project site is currently zoned as for heavy industrial uses ([Q]M3-1). The proposed Project site operates as a scrap metal recycling site and does not support timberland or forestland. Therefore, the proposed Project would not conflict with existing zoning for, or cause rezoning of, forestland, timberland, or timberland zoned Timberland Production. As such, no impact would occur, and there would be no significant new impact or substantial increase in the severity of a previously described impact. This issue will not be addressed further in the SEIR.

d. Result in the loss of forestland or conversion of forestland to non-forest use?

No Impact. The proposed Project site operates as a scrap metal recycling site and is zoned {Q}M3-1 (heavy industrial). No agricultural, forest land, or timberland exist on site, so the proposed Project would not result in a loss of forestland or the conversion of forestland to non-forest use. Therefore, no impact would occur and there would be no significant new impact or substantial increase in the severity of a previously described impact. This issue will not be addressed further in the SEIR.

e. Involve other changes in the existing environment that, because of their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forestland to non-forest use?

No Impact. As discussed above, the proposed Project site is in the Port of Los Angeles. The proposed Project site and surrounding properties are zoned [Q]M3-1 (qualified heavy industrial). No agricultural uses, farmland or forestland occurs within the surrounding area or at the proposed Project site. The proposed Project would not disrupt or damage the existing environment or result in the conversion of farmland to non-agricultural use or conversion of forestland to non-forest use. Therefore, no impact would occur and there would be no significant new impact or substantial increase in the severity of a previously described impact. This issue will not be addressed further in the SEIR.

4.3 Air Quality

4.3.1 Summary of Impacts Identified in the Certified EIR

The Certified EIR evaluated air quality associated with construction and operational activities in Chapter 3.3, *Meteorology and Air Quality*.

The Certified EIR analyzed construction-related emissions from construction equipment construction vehicles, worker vehicles, and fugitive dust. The Certified EIR determined that peak-day construction emissions for CO, SO_X, and PM_{10} would not exceed SCAQMD thresholds but that NO_X and VOC emissions would and therefore were considered to have a significant impact on air quality.

The Certified EIR also analyzed operational emissions from the shredder; emissions associated with off-site generation of electricity required for the shredder; combustion exhaust emissions from trucks, workers, on-site mobile equipment, ocean going vessels, and locomotives; and fugitive emissions from material loading, material moving (handling), and on-site truck transit.

Though the Certified EIR determined that no new equipment would be used for the Approved Project, existing on-site equipment was projected to operate for a greater number of days per year and would therefore result in increased emissions. Also, ship loading days, truck trips, employee trips, and rail car trips to the Approved Project site would increase under the Approved Project and would result in increased emissions. Table 2 summarizes emissions for the Approved Project. The Certified EIR determined that operation of the Approved Project would create a significant regional impact for VOCs, CO, and NO_X.

The Certified EIR also determined that the operation of the Approved Project would not cause a significant impact related to CO hotspots.

Table 2 1996 Approved Project Total Emission

Source	Emissions (lb/day)				
	VOC	CO	NOx	SOx	PM10
Fugitive Emissions	1.6	--	--	--	158
Point Source Emissions	443	1.0	5.6	0.6	3.2
Mobile Source Emissions	393	2,100	3,318	1,295	297
1996 Approved Project Total Emissions	838	2,101	3,324	1,296	458
1996 Approved Project Baseline Emissions	581	1,533	2,378	1,213	347
1996 Approved Project Increment	257	568	946	83	111
Regional Thresholds	55	550	55	150	150
Exceeds Thresholds?	Yes	Yes	Yes	No	No

Source: Table 3.3-13, Certified EIR 1996

The Certified EIR determined that the Approved Project would be consistent with the 1991 Air Quality Management Plan (AQMP) and would not interfere with the scheduled attainment of air quality standards for the region.

The Certified EIR also included a health risk assessment (HRA), which analyzed health risks from on-site sources of toxic air contaminants. The HRA analysis quantified PM_{10} emissions and conducted dispersion modeling to assess ground-level concentrations of PM_{10} at near-by sensitive and off-site worker receptors. The analysis then used results of air monitoring at and near the site to speciate PM_{10} into air toxic components; health risks associated with those air toxics were then evaluated using 1992 California Air Pollution Control Officers Association (CAPCOA) HRA methodology current at the time of the HRA. The Certified EIR determined that although operation of the Approved Project would increase PM_{10} emissions, metals, and PCBs, health risks from air toxics would be less than significant.

The Certified EIR found that operation of the Approved Project could create objectionable odors, which would be intermittent in nature. Since the Approved Project site is in an industrial area, this impact was determined to be less than significant.

Because the Certified EIR determined that the Approved Project's construction emissions of VOC and NO_X and operation emissions of VOC, CO, and NO_X would result in significant impacts, it provided mitigation measures to address these impacts; however, impacts remained significant and unavoidable.

The Certified EIR also determined that no cumulative impacts would occur related to air quality and emissions.

4.3.2 Impacts Associated with the Proposed Project

Environmental Issues	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than Significant Impact	No Impact
Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied on to make the following determinations. Would the project: a Conflict with or obstruct implementation of the applicable air quality plan?			X	
b. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is a nonattainment area for an applicable federal or state ambient air quality standard?	X			
c. Expose sensitive receptors to substantial pollutant concentrations?	X			
d. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?			X	

Discussion

Would the project:

a. Conflict with or obstruct implementation of the applicable air quality plan?

Less Than Significant Impact.

Air Quality Management Plan. The federal Clean Air Act (CAA) of 1970 and its subsequent amendments form the basis for the nation's air pollution control effort. The United States Environmental Protection Agency (EPA) is responsible for implementing most aspects of the CAA. A key element of the CAA is the national ambient air quality standards (NAAQS) for major air pollutants. The CAA delegates enforcement of the NAAQS to the states. In California, the California Air Resources Board (CARB) is responsible for enforcing air pollution regulations. CARB, in turn, delegates to local air agencies the responsibility of regulating stationary emission sources.

The SCAQMD monitors air quality within the proposed Project site and the South Coast Air Basin (Air Basin or Basin), which includes Orange County and portions of Los Angeles, Riverside, and San Bernardino Counties. The Basin is bounded by the Pacific Ocean to the west; the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east; and the San Diego County line to the south. For regions that do not attain the NAAQS, the CAA requires the preparation of a State Implementation Plan (SIP).

The SCAQMD 2016 AQMP (SCAQMD 2017) focused on attainment of the ozone and particulate matter with aerodynamic diameter less than 2.5 microns ($PM_{2.5}$) NAAQS through the reduction of ozone and $PM_{2.5}$ precursor NO_x, as well as through direct control of $PM_{2.5}$. In October 2015, the EPA strengthened the NAAQS for ground-level ozone, lowering the primary and secondary ozone standard levels to 70 parts per billion (ppb). In response, the SCAQMD developed the 2022 AQMP (SCAQMD 2022) to address the requirements for meeting this standard and focused on reducing NO_x emissions, a key pollutant in ozone formation, by 67 percent more than is required by adopted rules and regulations in 2037. Both the 2016 and the 2022 AQMP reported that despite continued population growth, air quality has improved significantly over the years, primarily due to the impacts of air quality control programs at the local, state, and federal levels.

Each AQMP builds upon measures in place from previous AQMPs and includes additional strategies such as regulations, accelerated deployment of cleaner technologies, best management practices (BMPs), co-benefits from existing programs, and incentives. Importantly, each AQMP proposes emission-reduction measures designed to bring the Basin into attainment of the national and state Ambient Air Quality Standards (AAQS). AQMP attainment strategies include mobile source control measures and clean fuel programs enforced at the state and federal levels on engine manufacturers and petroleum refiners and retailers.

Similar to current operations, the proposed Project operational activities would be required to comply with all applicable current local, state, and federal air quality regulations along with any development in the future as part of the AQMP. This would ensure that the proposed Project's activities would not obstruct implementation of the AQMP.

San Pedro Bay Ports Clean Air Action Plan. The LAHD adopted the San Pedro Bay Ports Clean Air Action Plan (CAAP), designed to reduce the health risks posed by air pollution from all port-related emissions sources, including ships, trains, trucks, terminal equipment, and harbor craft, in 2006 and adopted updates in 2010 and 2017 (LAHD 2006, 2017). The CAAP 2017 Update contains strategies to reduce emissions from sources in and around the Ports, plan for zero-emissions infrastructure, encourage freight efficiency, and address energy resources.

The proposed Project involves an amendment to Permit No. 750 allowing for the extension of the existing use and does not propose construction or physical changes. As discussed above, the proposed Project's activities would be required to comply with all applicable existing and developing air quality regulations ensuring that the proposed Project's activities would not obstruct implementation of the AQMP or CAAP. Therefore, a less than significant impact is expected and no significant new impact or substantial increase in the severity of a previously described impact would occur. This issue will not be addressed further in the SEIR.

b. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is a nonattainment area for an applicable federal or state ambient air quality standard?

Potentially Significant Impact. NAAQS and CAAQS, which define the maximum pollutant concentrations that can be present in outdoor air without harming public health, were established by the EPA and CARB, respectively, for the following criteria pollutants: CO, ozone, sulfur dioxide (SO_2), nitrogen dioxide (NO_2), particulate matter with aerodynamic diameter less than 10 microns (PM_{10}), $PM_{2.5}$, and lead. Areas are designated under the federal CAA as attainment, nonattainment, or maintenance for each criteria pollutant based on whether the NAAQS have been achieved. Similarly, areas are also designated under California law as attainment or nonattainment for each criteria pollutant based on attainment with the CAAQS. The Los Angeles County area of the Basin, which includes the Port of Los Angeles, is designated as a federal nonattainment area for ozone and $PM_{2.5}$ and state nonattainment area for ozone, PM_{10}, and $PM_{2.5}$.

The area is also in federal nonattainment for lead. The attainment designation for lead is due primarily to lead-acid battery recyclers in the Basin. The proposed Project would not use leaded fuel or recycle lead-acid batteries. Therefore, lead is not a pollutant of concern for the proposed Project.

SCAQMD has developed maximum daily emissions significance thresholds for all criteria pollutants for assessment of impacts under CEQA. Impacts are assessed by calculating the difference between the baseline and project emissions (i.e., CEQA increment) and comparing the CEQA increment for each pollutant to the SCAQMD's significance thresholds.

Cumulative impacts may result from individually minor but collectively significant projects. CEQA Guidelines Section 15355 define cumulative impacts as “two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts.” CEQA Guidelines Section 15064(h)(4) also state that “the mere existence of cumulative impacts caused by other projects alone shall not constitute substantial evidence that the proposed Project’s incremental effects are cumulatively considerable.”

The proposed Project involves an amendment to an existing permit to allow for the 10-year extension of an existing use only. The proposed Project would not expand processing capacity and would not create new employee, truck, vessel or rail trips, and would not generate new sources of fugitive dust or mobile or stationary emissions. Although proposed Project activities and throughput would not change from what was analyzed in the Certified EIR, federal and state attainment designations for the Basin, AAQS, thresholds, and analysis methodologies have changed since preparation of the 1996 Certified EIR. Specifically, the NAAQS and CAAQS have been revised several times by the EPA and CARB, respectively. In addition, NAAQS and CAAQS were added for $PM_{2.5}$ in 1997 and revised several times since then. Therefore, to adequately assess impacts from ongoing operations at the proposed Project site, additional analysis will be conducted to determine if the proposed Project could result in a new direct or cumulatively considerable, and therefore significant, net increase in air emissions, including but not limited to criteria pollutants, for which the proposed Project region is a nonattainment area for an applicable federal or state ambient air quality standard. The analysis will also consider whether the proposed Project would result in a substantial increase in the severity of the previously identified significant effects in the 1996 Certified EIR, among other factors, as required by CEQA Guidelines Section 15162. Therefore, these issues will be evaluated further in the SEIR.

c. Expose sensitive receptors to substantial pollutant concentrations?

Potentially Significant Impact. The proposed Project involves an amendment to an existing permit to allow for continued operation of the existing scrap metal processing site. The proposed Project would not expand processing capacity and would not create new employee, truck, vessel or rail trips, and would not generate new sources of fugitive dust or mobile or stationary emissions beyond the Approved Project.

Although proposed Project activities and throughput would not change from what was analyzed in the Certified EIR, some AAQS, thresholds, and analysis methodologies have changed since preparation of the Certified EIR in 1996. There may also be changes in circumstances with respect to the location of sensitive receptors that is different from those identified in the 1996 Certified EIR. The Draft SEIR will consider these issues as well.

The following is not an all-inclusive list but identifies revisions that warrant additional evaluation.

- SCAQMD added $PM_{2.5}$ to the CEQA significance thresholds after the

Certified EIR was prepared in 1996.

- The Certified EIR did not assess the Approved Project's impact on ambient air quality as it was not required at the time. Since that time, SCAQMD developed the Localized Significance Thresholds (LST) screening methodology, which allows users to determine, in lieu of conducting cumbersome air dispersion modeling, if a project would cause or contribute to an exceedance of the AAQS.
- CARB designated diesel particulate matter (DPM) as a toxic air contaminant in 1998, after preparation of the Certified EIR. Since the SCAQMD considers PM_{10} as a surrogate for DPM, it is reasonable to conclude that impacts from DPM were accounted for in the Certified EIR. Nevertheless, this warrants further evaluation.
- The Certified EIR considered on-site emissions in the HRA and did not analyze contribution from off-site emissions such as those associated with ocean-going vessels, tugboats, of off-site truck and rail transit.
- The Office of Health Hazard Assessment (OEHHA) revised the HRA methodology since 1996, most recently in 2015 to include, among other revisions, age sensitivity factors which may result in more conservative cancer risk.

Therefore, to adequately assess impacts, additional analysis will be conducted to determine if any new or cumulatively considerable impacts to sensitive receptors could occur due to proposed Project operations. The analysis will also consider whether the proposed Project would result in a substantial increase in the severity of the previously identified significant effects in the 1996 Certified EIR, among other factors, as required by CEQA Guidelines Section 15162. As such, this issue will be evaluated further in the SEIR.

d. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

Less-than-Significant Impact. The proposed Project would not include any new construction, nor would it expand operations on the proposed Project site. The existing industrial setting of the proposed Project represents an already complex odor environment. Odors from operation of the proposed Project would be similar to odors produced from existing industrial operations and related activity and would be primarily associated with vessels berthed at the terminal and on-site mobile equipment exhaust. Within this context, the proposed Project would not likely result in changes to the overall odor environment in the vicinity The distances between proposed Project emission sources and the nearest sensitive receptors, possible residents at the marina on the east side of the East Basin are far enough away to allow for adequate dispersion of these emissions to below objectionable odor levels. Impacts would be less than significant and no significant new impact or substantial increase in the severity of a previously described impact would occur. Therefore, this issue will not be evaluated in the SEIR.

4.4 Biological Resources

4.4.1 Summary of Impacts Identified in the Certified EIR

Potential impacts to biological resources were evaluated in Section 3.5, *Biota and Habitats*, of the Certified EIR. The Certified EIR determined that, of the state and federally listed endangered species known from harbor areas, only the California least tern had the potential to be affected by the Approved Project. The California least tern might use waters adjacent to the Approved Project site for foraging; however, anticipated increased vessel activity would reduce foraging time by only a small amount and would not adversely impact the species. The California brown pelicans do not use the area for nesting or breeding, and their primary foraging areas are the outer harbor and offshore waters. The Approved Project was found to incorporate changes and improvements that would eliminate or reduce potential contamination to adjacent waters, including the soil remediation program, implementation of the SWPPP, and other site improvements under the Approved Project. The Certified EIR determined that the Approved Project's impacts to biological resources were less than significant, and no mitigation measures were proposed.

4.4.2 Impacts Associated with the Proposed Project

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

Discussion

Would the project:

a. *Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?*

Less Than Significant Impact. No candidate, sensitive, or special-status species are known to occur on the proposed Project site, and there is no federally designated critical habitat in the harbor area. The proposed Project would not include any new construction, alteration or expansion of existing on-site processing, vessel trips, or uses beyond what was previously analyzed; therefore, the proposed Project would not have any adverse effect on sensitive species such as marine mammals in the channel or the endangered California least terns (*Sternula antillarum*) at the Pier 400 Nesting site. The proposed Project would not result in any impacts to candidate, sensitive, or special status species. No significant new impact or substantial increase in the severity of a previously described impact would occur. Therefore, this issue will not be evaluated further in the SEIR.

b. *Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?*

No Impact. There is no riparian habitat or sensitive communities at the proposed Project site or in the vicinity, and the proposed Project would not involve any new construction or alteration of existing operations on site. The proposed Project site is on Terminal Island in the Port of Los Angeles. After World War II, Berths 208 through 211 (including the proposed Project site) were used for ship dismantling and scrap metal processing. Hugo Neu-Proler Company began scrap metal processing at the proposed Project site in 1962, and the site has continued operating as a scrap metal recycling site to this day. Therefore, no impact on riparian habitats would occur and no significant new impact or substantial increase in the severity of a previously described impact would occur. This issue will not be addressed further in the SEIR.

c. *Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marshes, vernal pools, coastal wetlands, etc.) through direct removal, filling, hydrological interruption, or other means?*

No Impact. The existing recycling site does not encompass any federally protected wetlands (as defined by Section 404 of the Clean Water Act) because there are no federally protected wetlands in the area. The channels and basins that make up the POLA waterways are identified as Estuarine Marine Deepwater by the United States Fish and Wildlife Service (USFWS). The proposed Project involves an amendment to an existing permit to allow the 10-year extension of the existing use and does not include any new construction or alteration of processing capacity beyond existing conditions. In addition, the proposed Project would not affect or require in-water or over-water work. Therefore, no impact would occur and no significant new impact or substantial increase

in the severity of a previously described impact would result from the proposed Project. This issue will not be addressed further in the SEIR.

d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species, or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

No Impact. The proposed Project site is completely developed and operates as a scrap metal recycling site. The proposed Project would not include any new construction or alteration of existing on-site operations, and no known wildlife migration corridors are present at the proposed Project site. Therefore, the proposed Project would not interfere with the movement of any native resident or migratory fish or wildlife species nor impede the use of native wildlife nursery sites. Therefore, the proposed Project would have no impact and no significant new impact or substantial increase in the severity of a previously described impact would occur. This issue will not be addressed further in the SEIR.

e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

No Impact. The proposed Project site is completely developed with a scrap metal recycling site. The only biological resources protected by City of Los Angeles ordinance (City of Los Angeles 2006) are certain tree species, none of which are present on the proposed Project site. Landscaping, including ornamental trees, exist in the parking lot on the southern side of the proposed Project site, but the trees are not the species protected the ordinance. In addition, the proposed Project would not include any construction or change of operations at the proposed Project site. Therefore, the proposed Project would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinances. As such, no impact would occur and no significant new impact or substantial increase in the severity of a previously described impact would result from the proposed Project. This issue will not be addressed further in the SEIR.

f. Conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan?

No Impact. Neither the proposed Project site nor any adjacent areas are included as part of an adopted natural communities conservation plan or local habitat conservation plan (USFWS 2020; CDFW 2020). The closest conservation plan area is a proposed Natural Community Conservation Plan/Habitat Conservation Plan (NCCP/HCP) in the City of Rancho Palos Verdes, approximately 3 miles west of the proposed Project site (CDFW 2020). Therefore, the proposed Project would not adversely affect any areas identified in an adopted plan or conflict with the provisions of an adopted community conservation, habitat conservation, or other plan. As such, no impact would occur and no significant new impact or substantial increase in the severity of a previously described impact would result from the proposed Project. This issue will not be addressed in the SEIR.

4.5 Cultural Resources

4.5.1 Summary of Impacts Identified in the Certified EIR

Cultural Resources were not evaluated in the Certified EIR.

4.5.2 Impacts Associated with the Proposed Project

Environmental Issues	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than Significant Impact	No Impact
a. Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?				X
b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?				X
c. Disturb any human remains, including those interred outside of dedicated cemeteries?				X

Discussion

Would the project:

a. *Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?*

No Impact. The proposed Project would not require the demolition or removal of any structures. In addition, the proposed Project site does not contain any known historic resources (NPS 2020; OHP 2020). Therefore, no impacts on historical resources would occur, and no significant new impact or substantial increase in the severity of a previously described impact would result from the proposed Project. This issue will not be addressed further in the SEIR.

b. *Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?*

No Impact. The proposed Project site is in Planning Area 3 of the PMP. Planning Area 3 is underlain by artificial fill material and has little likelihood of containing intact archaeological deposits . The proposed Project site has been extensively disturbed with the operation of the scrap metal recycling site. Because of the highly disturbed nature of the site and that the proposed Project would not include any construction or earthwork that may unearth archaeological resources, there would be no interaction with archaeological resources. Therefore, no impact would occur, and no significant new impact or substantial increase in the severity of a previously described impact would result from the proposed Project. This issue will not be addressed further in the SEIR.

c. Disturb any human remains, including those interred outside of dedicated cemeteries?

No Impact. No prehistoric sites or cemeteries have been identified in the proposed Project site or within a 0.25-mile radius of the site. There is no evidence of any human remains, including those interred outside of dedicated cemeteries, within the proposed Project site that would be affected by the proposed Project and the proposed Project does not include any construction or earthwork that would unearth human remains. Furthermore, as this location is on artificial fill created in the 20th century; therefore, the proposed Project could not unearth human remains. No impact on buried human remains would occur, and no significant new impact or substantial increase in the severity of a previously described impact would result from the proposed Project. Therefore, this issue will not be addressed further in the SEIR.

4.6 Energy

4.6.1 Summary of Impacts Identified in the Certified EIR

The Certified EIR evaluated the potential energy impacts of the Approved Project in Section 3.10, *Energy*. The Approved Project's consumption of electric power, natural gas, and liquid fuels and determined that the Approved Project would result in higher electricity consumption based on increased processing (throughput) and the installation of new equipment. The increase in electricity demand was not expected to result in off-site modification to the electricity distribution system. Also, the increase in electricity use for the Approved Project was determined to be very small compared to the total Los Angeles Department of Water and Power's power system demand and would not result in a shortfall of electrical generating capacity. Therefore, the Certified EIR determined that the proposed Project would not result in a significant impact to electricity utilities.

The Certified EIR determine that the Approved Project would require negligible amounts of natural gas beyond what was currently used at the time. The increase in natural gas would not have any significant impact on Southern California Gas's supply and capacity. Upon completion, the Approved Project would increase liquid fuel consumption (which included diesel fuel, gasoline, and liquefied petroleum gas) compared to conditions existing at the time. Though the increase in consumption of these fuels represented a substantial increase over existing conditions, the Certified EIR did not anticipate that the Approved Project would result in fuel supply constraints, and that the fuel use represented an insignificant portion of the overall fuel use in the Los Angeles area. The Certified EIR determined that the Approved Project would not result in a significant impact to energy.

Cumulatively, the increase in energy use was also found insignificant because the total annual use represented a small percentage of the total fuel use in California.

4.6.2 Impacts Associated with the Proposed Project

Environmental Issues	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than Significant Impact	No Impact
a. Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation?				X
b. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?				X

Discussion

Would the project:

a. *Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation?*

No Impact. The proposed Project would not propose any new construction nor increase the operational capacity at the proposed Project site. The operation of the scrap metal recycling site would continue at the proposed Project site, which would require the use of electricity, natural gas, and liquid fuels. The proposed Project would consume similar energy levels as the operation in fiscal year 2021/2022. The proposed Project would require the use of diesel and gasoline to operate equipment during operation and for worker vehicles. Gasoline for worker and patron vehicles would be the primary energy resources needed during operation. In addition, diesel would be needed for the trucks mobile equipment and electricity for on-site lighting, building lighting, and other equipment. Additionally, a diesel electric hybrid crane was installed on site in 2017 (analyzed in a 2016 IS/MND) that is zero emissions. The electricity demand in 2021 was 65,374 GWh for Los Angeles County (CEC 2020a). Natural gas consumption in Los Angeles County in 2021 was 2,880 million British thermal units (CEC 2020b). Therefore, due to the limited amount of electricity and natural gas use compared to that available for use, the proposed Project would not generate new energy use and would not result in a wasteful, inefficient, or unnecessary consumption of energy resources. In 2017, 3,659 million gallons of gasoline and 301 million gallons of diesel were sold in Los Angeles County (County of Los Angeles 2019).

Based on the maximum projected use of fuels for this proposed Project as compared to overall sales in the county, the proposed Project would not result in a wasteful use of energy. Therefore, these energy uses do not constitute wasteful, inefficient, or unnecessary consumption and impacts would be less than significant. No significant new impact or substantial increase in the severity of a previously described impact would occur. This issue will not be addressed further in the SEIR.

b. *Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?*

No Impact. The state's electricity grid is transitioning to renewable energy under California's Renewable Portfolio Standard (RPS) Program. Renewable sources of electricity include wind, small hydropower, solar, geothermal, biomass, and biogas. The RPS goals have been updated since adoption of Senate Bill 1078 in 2002. In general, California has RPS requirements of 33 percent renewable energy by 2020 (Senate Bill X1-2), 44 percent by 2024, 50 by 2026, 52 percent by 2027, 60 percent by 2030, and 100 percent by 2045. The RPS requirements established under SB 100 are also applicable to publicly owned utilities. The statewide RPS requirements do not directly apply to individual development projects, but to utilities and energy providers such as Southern California Edison, whose compliance with RPS requirements would contribute to the state objective of transitioning to renewable energy.

In addition to the RPS Program, the City of Los Angeles maintains a sustainability plan that identifies a Port related target (Reduce Port-related GHG emissions by 80 percent by 2050) and milestones and initiatives to achieve the target (City of Los Angeles 2019). The proposed Project does not include any new construction, nor does it expand the processing capacity of the operation. Additionally, the site under the proposed Project would remain subject to any current requirements. Furthermore, as stated above, RPS requirements are applicable to utilities and energy providers, and thus would not be applicable to the proposed Project. Therefore, the proposed Project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency, and no impact would occur. No significant new impact or substantial increase in the severity of a previously described impact would occur. This issue will not be addressed further in the SEIR.

4.7 Geology and Soils

4.7.1 Summary of Impacts Identified in the Certified EIR

Section 3.1, *Geology*, of the Certified EIR evaluated erosion and geological hazards during the construction and operation of the Approved Project. During construction, the Certified EIR determined that construction activities might result in temporary increases in erosion of soils by wind and surface water. However, due to the paving of the operational area, the Certified EIR determined that there would be an overall decrease in erosion in that location, and erosion during construction was expected to be temporary and insignificant.

The Certified EIR determined that, during operation of the Approved Project, the facilities on Berths 210 and 211 would be particularly susceptible to damage from a local or regional earthquake if liquefaction of the fill were to occur. Seismic activity along the Newport-Inglewood Fault Zone, the San Andreas Fault, and the Palos Verdes Fault is likely to produce cyclic ground shaking during moderate (nearby) or large (distant) earthquakes.

Liquefaction and ensuing ground failure within the Port were considered significant. The Certified EIR determined that the Approved Project and other projects in the region that would be developed during the Approved Project's period of operation would not have any cumulative impact on the probability of occurrence for geologic hazards such as earthquakes and flooding in the region. The Approved Project would place new structures in an area affected by geologic hazards; however, the increase would be relatively small compared to the total number of new structures proposed for the area and other potential local developments.

The Certified EIR determined that compliance with federal, state, and local building codes would reduce potential adverse impacts from seismic events to the maximum extent practicable. Ground shaking at the Approved Project site was determined to be significant and unavoidable. No feasible mitigation measures were identified to reduce ground-shaking on site. Geologic hazards from earthquakes would remain significant.

4.7.2 Impacts Associated with the Proposed Project

Environmental Issues	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than Significant Impact	No Impact
Would the project: a. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: 1. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.			X	
2. Strong seismic ground shaking?			X	
3. Seismic-related ground failure, including liquefaction?			X	

Environmental Issues	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than Significant Impact	No Impact
4. Landslides?			X	
b. Result in substantial soil erosion or the loss of topsoil?			X	
c. Be located on a geologic unit or soil that is unstable or that would become unstable as a result of the project and potentially result in an onsite or offsite landslide, lateral spreading, subsidence, liquefaction, or collapse?			X	
d. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?				X
e. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems in areas where sewers are not available for the disposal of wastewater?				X
f. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?				X

Discussion

Would the project:

a. *Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:*

1. *Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.*

Less-than-Significant Impact. The Palos Verdes Fault Zone traverses the Port in a northwest-to-southeast manner from the West Turning Basin to Pier 400 and beyond. The Palos Verdes Fault Zone roughly encompasses a 50-mile-long area that travels through the communities of San Pedro, Palos Verdes Estates, Torrance, and Redondo Beach (USGS 2022). According to Figure 2, *Palos Verdes Fault Zone,* of the 2018 PMP, the Palos Verdes fault crosses the proposed Project area. In addition to the Palos Verdes Fault Zone, the northern terminus of the Wilmington blind thrust fault line is immediately adjacent to and just northeast of the proposed Project. According to the 2017 *Activity and Earthquake Potential of the Wilmington Blind Thrust, Los Angeles, CA Final Technical Report* submitted to the U.S. Geological Survey, the fault line is between Cannery Street and the proposed Project site (Wolfe et al. 2017). The proposed Project does not propose any new construction or increase in the operational capacity from the existing scrap metal yard; therefore, the proposed Project does not include the addition of any new structures meant for human occupancy (consequently, potential impacts on people and structures would be negligible) and would not contain features that would directly or indirectly cause or intensify effects associated with fault rupture. Therefore, impacts would be less than significant and no significant new impact or substantial increase in the severity of a previously described impact would occur. This issue will not

be addressed further in the SEIR.

2. Strong seismic ground shaking?

Less-than-Significant Impact. The proposed Project area lies near the Palos Verdes Fault Zone; therefore, potential hazards exist because of seismic activity associated with active faults and the presence of engineered fill[2] throughout the area. The exposure of people to seismic ground shaking is a potential risk with or without the proposed Project. The risk of seismic hazards such as ground shaking cannot be avoided. The existing structures on the proposed Project site have complied with applicable engineering standards and building codes, as well as applicable sections of the Los Angeles Building Code, and emergency planning and coordination has also contributed to reducing injuries to on-site personnel and patrons during seismic activity. The proposed Project does not propose any new construction or increase operational capacity on the proposed Project site; thus, the proposed Project would not result in any new impacts or increase in the severity of impacts with respect to ground shaking. Thus, this impact would be less than significant and no significant new impact or substantial increase in the severity of a previously described impact would occur. This issue will not be addressed further in the SEIR.

3. Seismic-related ground failure, including liquefaction?

Less-than-Significant Impact. Liquefaction occurs when saturated, low-density loose materials (e.g., sand or silty sand) are weakened and transformed from a solid to a near-liquid state as a result of increased pore water pressure. The increase in pressure is caused by strong ground motion from an earthquake. Liquefaction most often occurs in areas underlain by silts and fine sands and where shallow groundwater exists. The harbor area, including the proposed Project site, is identified as an area that is susceptible to liquefaction, per the California Geological Survey's Earthquake Zones of Required Investigation (1999). This is due to the presence of engineered fill and shallow groundwater at the proposed Project site. The exposure of people to liquefaction is a potential risk with or without the proposed Project. The risk of seismic hazards such as liquefaction cannot be avoided. Building and construction design codes are meant to minimize structural damage resulting from a seismic event. The existing structures on the proposed Project have complied with applicable engineering standards and building codes, as well as applicable sections of the Los Angeles Building Code. Emergency planning and coordination would also contribute to reducing injuries to on-site personnel and patrons during seismic activity. The proposed Project does not propose any new construction or increase operational capacity on the proposed Project site; thus, the proposed Project would not change or exacerbate the potential to expose people or structures to seismic hazards or result in any new impacts or increase in the severity of impacts with respect to liquefaction. Thus, this impact would be less than significant and no significant new impact or substantial increase in the severity of a previously described impact would occur. This issue will not be addressed further in the SEIR.

[2] According to the 2018 PMP, the Port has been physically modified through past dredge-and-fill projects. The Natural Resources Conservation Service's Web Soil Survey identifies soils in the proposed Project area as Urban Land, 0 to 2 percent slopes, dredged fill substratum.

4. Landslides?

Less Than Significant Impact. Topography in the vicinity of the proposed Project site is flat and is not within an area susceptible to landslides (DOC 2020a). The 1996 Certified EIR determined the proposed Project site has a high probability of geologic hazards, including on-site slope failure, during an earthquake. Since the proposed Project does not propose any new construction or increase in operational capacity and would not result in any new impacts or increase the severity of impacts with respect to slope failure compared to the project approved in 1996. Thus, a less than significant impact would occur and no significant new impact or substantial increase in the severity of a previously described impact would occur. This issue will not be addressed further in the SEIR.

b. Result in substantial soil erosion or the loss of topsoil?

Less Than Significant Impact. The 1996 Certified EIR determined that construction of the Approved Project could result in temporary erosion, which was determined to be insignificant. The proposed Project site is currently covered with pavement, including the operational area. Since the proposed Project does not include any new construction, no changes to soil erosion beyond that was analyzed in the 1996 Certified EIR would occur. In addition, the implementation of the proposed Project would not modify the site's existing drainage patterns. Operations would continue to occur in compliance with the Municipal Separate Storm Sewer System (MS4) permit (R4-2012-0175-A01 and future iterations). Therefore, impacts related to soil erosion or loss of topsoil would be less than significant, and no significant new impact or substantial increase in the severity of a previously described impact would occur. This issue will not be addressed further in the SEIR.

c. Be located on a geologic unit or soil that is unstable or that would become unstable as a result of the project and potentially result in an onsite or offsite landslide, lateral spreading, subsidence, liquefaction, or collapse?

Less-than-Significant Impact. The 1996 Certified EIR determined that the Project site would be subject to ground shaking and that geologic hazards, such as liquefaction, settlement, slope failure, or surface cracks at the Project site, have a relatively high probability of occurrence. The proposed Project does not include any new construction or changes beyond what was previously approved. The proposed Project would not result in any new impacts or increase the severity of impacts with respect to soil instability compared to the Approved Project analyzed in 1996. As discussed above, the proposed Project area is near the active Palos Verdes fault and within liquefaction-prone engineered fill. The exposure of people to liquefaction is a potential risk with or without the proposed Project. The risk of seismic hazards such as liquefaction cannot be avoided. Building and construction design codes are meant to minimize structural damage resulting from a seismic event. Structures on the proposed Project site have complied with applicable engineering standards and building codes, as well as applicable sections of the Los Angeles Building Code. The closest landslide zone to the proposed Project site is approximately 1,500 feet away. Through compliance with current regulations and standard engineering practices, this impact would be less than significant and no significant new

impact or substantial increase in the severity of a previously described impact would occur. This issue will not be addressed further in the SEIR.

d. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?

No Impact. Existing structures on the proposed Project site have been designed and constructed consistent with implementation of Chapter IX, Building Regulations, of the Los Angeles Municipal Code, in conjunction with criteria established by LAHD, and will not result in substantial direct or indirect risks to life or property. Further, the Approved Project in 1996 was subject to the local, state, and federal building codes that would reduce impacts. The proposed Project would not include any new construction or changes to the scope of the permit beyond the amendment to allow for the extension of the existing use for 10 years. Therefore, no impact would occur, and no significant new impact or substantial increase in the severity of a previously described impact would result from the proposed Project. This issue will not be addressed further in the SEIR.

e. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems in areas where sewers are not available for the disposal of wastewater?

No Impact. Section 3.11 of the 1996 Certified EIR, *Utilities and Waste Management*, states that the Project site is served by the wastewater collection system that serves the New Dock Street area and is ultimately transferred to the Terminal Island Treatment Plant. The proposed Project includes an amendment to the existing permit to allow for the existing use to continue operating for 10 years and does not propose any new construction or change in operations. The proposed Project would continue to be served by the existing wastewater system, and the use of septic tanks is not proposed as part of the proposed Project. The proposed Project would not include septic tanks or alternative wastewater disposal systems, and no impact would occur. In addition, no significant new impact or substantial increase in the severity of a previously described impact would occur. Therefore, this issue will not be addressed further in the SEIR.

f. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

No Impact. The proposed Project site occupies the north-central margin of Terminal Island, which was formerly part of Rattlesnake Island, which consisted of shallow tidelands and coastal islands. The creation of Terminal Island began in the early 1900s with landfilling activities from dredged sediments. The portion of the landfill that the proposed Project site occupies was made in the 1940s. Typically, these fill materials consist of grey to brown, fine to median grained sand and silty sand with varying percentages of shell fragments and mica that range between 5 to 10 feet in thickness. Because of the highly disturbed nature of the site and that the proposed Project does not include any new construction that would cause ground disturbance, interaction with paleontological resources or unique geologic features would not occur. Therefore, no impact would occur and no significant new impact or substantial increase in the severity of a previously described impact would result from the proposed Project. This issue will not be addressed further in the SEIR.

4.8 Greenhouse Gas Emissions

4.8.1 Summary of Impacts Identified in the Certified EIR

The Certified EIR did not analyze greenhouse gas (GHG) emissions.

4.8.2 Impacts Associated with the Proposed Project

Environmental Issues	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than Significant Impact	No Impact
Would the project: a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	X			
b. Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?				

Discussion

Would the project:

a. *Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?*

Potentially Significant Impact. The proposed Project involves an amendment to an existing permit to allow an existing use to continue for the next 10 years. The proposed Project would not expand processing capacity and would not create new employee, truck, vessel or rail trips, and would not generate new sources of emissions.

SB 97 added GHG emissions to Appendix G CEQA checklist in 2008, after the 1996 Certified EIR was prepared. Therefore, although proposed Project activities and throughput would not change from what was analyzed in the 1996 Certified EIR, GHG emissions would need to be quantified. Therefore, this issue will be evaluated in the SEIR.

b. *Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?*

This question is being answered as an informational assessment; the information provided is not meant to produce an impact determination for the proposed Project. The State of California is leading the way in the United States with respect to GHG emissions reductions. Several legislative and municipal targets for reducing GHG emissions below 1990 levels have been established. Key examples include, but are not limited to:

- California Climate Strategy

- 2006 Assembly Bill (AB) 32
    - 1990 GHG emissions levels by 2020
    - 40 percent below 1990 GHG emissions levels by 2030
    - 80 percent below 1990 GHG emissions levels by 2050
- Senate Bill (SB) 32 and 2017 Scoping Plan (target: 40 percent reduction below 1990 by 2030)
- Executive Order B-55-18
    - target of carbon neutrality by 2045
    - 2022 Scoping Plan
- California Renewables Portfolio Standard
- SB 375
    - consistency with the 2020–2045 Southern California Association of Governments Regional Transportation Plan/Sustainable Communities Strategy)
- Port and City of Los Angeles Plans and Strategies
- San Pedro Bay Ports CAAP
    - 40 percent below 1990 GHG emissions levels by 2030
    - 80 percent below 1990 GHG emissions levels by 2050
- City of Los Angeles C&D Waste Recycling Ordinance
- City of Los Angeles' Green New Deal Sustainable City pLAn (4-Year Update to the Sustainable City pLAn)
    - reduce Port-related GHG emissions by 80 percent by 2050
- City of Los Angeles General Plan, Mobility Element
- City of Los Angeles Green Building Code, Title 24

Several state, regional, and local plans have been developed which set goals for the reduction of GHG emissions over the next few years and decades, but no regulations or requirements have been adopted by relevant public agencies to implement those plans for specific projects, within the meaning of CEQA Guidelines Section 15064.4(b)(3)[3]. However, there are GHG emissions reduction measures contained in state and local plans, strategies, policies, and regulations that directly or indirectly affect the proposed Project's construction and operation GHG emissions source sectors or specific types. This informational item will be discussed further in the SEIR.

[3] Center for Biological Diversity v. Cal. Dept. of Fish and Wildlife [Newhall Ranch] [2015] 62 Cal.4th 204, 223.

4.9 Hazards and Hazardous Materials

4.9.1 Summary of Impacts Identified in the Certified EIR

Potential impacts related to hazards and hazardous materials were addressed in Section 3.8 of the Certified EIR. At the time of the issuance of the Certified EIR, 60 percent of the site was paved. One of the objectives of the Certified EIR included remediation of soil and groundwater contamination pursuant to a remedial action plan approved by the LARWQCB, the DTSC, and the Port of Los Angeles. The purposes of the site changes evaluated in the Certified EIR included the remediation of existing soil and groundwater contamination at the site and protection against future contamination.

The Certified EIR found that hazardous materials could be present in loads delivered to the site. Accordingly, all loads are inspected, and the site does not routinely accept vehicles with batteries or fluids (brake, transmission, antifreeze, motor oil) in cars. Other prohibited items include fluorescent light fixtures, chlorofluorocarbons, radioactive materials, drums and barrels that are not certified clean, asbestos-containing materials, unemptied compressed gas cylinders, mercury control switches, transformers, hazardous materials, hazardous waste, ammunition, batteries, and any PCB-containing materials. All trucks pass through radiation detectors.

The Certified EIR evaluated the impacts from a diesel fuel release in 1988 that impacted soil and groundwater. The fuel was determined to have leaked from an underground pipeline during an underground storage tank retrofit operation. Since 1988, free product is removed from the Site wells using a combination of passive skimmers, hand bailing, and absorbent socks. Since 2002 after certification of the Certified EIR, contaminated soil throughout the site has been excavated and replaced with clean soil and an engineered cap, which consists of concrete pavement over base material. Soil confirmation samples met the WDR Order No. 96-020 cleanup levels and were reviewed by the Port of Los Angeles and LARWQCB.

The Certified EIR determined that construction activities associated with the Approved Project would require excavation, soil disruption, compaction, backfilling, and possible dewatering activities. These activities were considered minor in scope, and that soils above threshold levels that were excavated during construction would be disposed of in accordance with the approved remedial action plan. The Certified EIR determined that site improvements would reduce the potential for soil and groundwater impacts. The Certified EIR provides a mitigation measure to address potential leaks from petroleum storage tanks from entering the soil and groundwater. Further, the Certified EIR determined that continued operation of the scrap metal recycling site would not impact public water supplies.

4.9.2 Impacts Associated with the Proposed Project

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

Discussion

Contamination and Remediation History

The proposed Project site has been used as a scrap metal recycling site since 1962. Prior to the scrap metal recycling site use on site, Berths 209 through 214 (which include the proposed Project site) were used for ship building during World War II. The proposed Project site was occupied by shipbuilding dry docks in the 1940s. By 1946, the dry docks were in the process of being removed. Following WWII, Berths 208 through 212 (which included the proposed Project site), were used for ship dismantling and scrap metal processing.

Several investigations of subsurface soil and groundwater were conducted from 1990 to 1994 under the oversight of the LARWQCB to assess the environmental impact from long-term scrap metal recycling and ship building and breaking at the site. Vadose zone soils were determined to contain petroleum hydrocarbons, metals, PCBs, and polycyclic aromatic hydrocarbons. Low-level detections of methyl tert-butyl ether and tert-butyl alcohol were present but were attributed to an unknown off-site source. The LARWQCB required the applicant to install a concrete cap on the property and to conduct semiannual groundwater

monitoring as part of remediation plans. Both actions were required to prevent soil and groundwater contamination from ongoing shredding activities.

A baseline risk assessment was completed in January 1995, and the results were used to develop soil cleanup levels for the site. As part of the site remediation, a permanent engineered cap was required. In 1996, the Applicant applied for Waste Discharge Requirements (WDR) for the site to remediate metals- and organics- containing soil. WDR Order No. 96-020, for soil remediation activities and groundwater monitoring, authorized on-site fixation and containment of fixated soil, however, all impacted soil was excavated and removed. Remediation and monitoring of the UST release and associated free product plume is separate from the WDR under LARWQCB oversight. From 1999 to 2002, soils with constituents above cleanup levels were excavated, and confirmation sampling was completed. Approximately 80,000 cubic yards of soil were excavated and transported off site for legal disposal. Once an area met established cleanup levels, it was backfilled, graded, and capped with concrete. Based on the change in the remediation program from fixation/burial to excavation/export, a request was made to rescind the WDR because no fixated soil remained at the proposed Project site.

Based on the analytical results documenting the acceptance criteria at each location, a document titled “Formal Request for Clean Closure Approval and Termination of LARWQCB Order No. 96-020 (File No. 90-47) Monitoring and Reporting Program No. 7656” was submitted to the LARWQCB on June 26, 2003. Following correspondence with the LARWQCB and meetings both on and off site, the WDR was rescinded by the LARWQCB on May 7, 2012, and wells associated with the WDR were removed from the current monitoring well-sampling program.

The Applicant is continuing with a modified groundwater monitoring program in order to monitor the free product plume on site. Since the WDR was rescinded, groundwater monitoring has focused on VOCs and total petroleum hydrocarbons in the gasoline, diesel, and motor oil ranges. The current groundwater monitoring program began in June 2012.

Following the release of diesel fuel in 1988, a program was initiated to delineate and determine the extent of free product. The plume volume was estimated to range between 2,900 and 5,100 gallons of product covering approximately 13,500 square feet. Quarterly progress reports were subsequently prepared documenting the progress of the free product removal results. The free product recovery system was improved in 2012, and by 2013 the estimated recovery volume was approximately 144 gallons. In 2015, as requested by LARWQCB, a conceptual site model was prepared to estimate the light non-aqueous phase liquid (LNAPL) profile across the site. The estimated remaining volume of free product was 1,994 gallons covering approximately 9,000 square feet. Remaining recovery efforts utilize passive bailers. The characteristics and quantity of the minimal remaining product removed are recorded on a weekly basis.

Fifteen monitoring wells are gauged and tested biennially for pH, temperature, electrical conductance, dissolved oxygen, oxidation-reduction potential, salinity and turbidity. Water samples from five wells of the fifteen are tested for total petroleum hydrocarbons and VOCs. The most recent report, dated June 17, 2020, showed that total petroleum hydrocarbons diesel range (TPH-d) concentrations are fluctuating over time and are near the laboratory method detection limit. The presence of free floating motor oil in the one monitoring well was investigated by HNP and determined to be the result of sabotage.

In addition to producing ferrous and non-ferrous metal products, the shredding process produces a metal shredder residue (MSR) containing nonmetallic constituents such as wood, plastic, rubber, glass and fibers. MSR contains a small amount of residual metal (less than one percent by weight). The MSR is treated prior to being transported to and disposed of at a permitted site. As noted in Section 2.3.3, Regulatory Agency Permits, the site is an f-listed facility, which means the MSR, once treated, can be considered nonhazardous under CCR Title 22 Section 66260 200 subdivision (f). RTO air filtration media and filters are used in the shredder at different stages. The media and filters are periodically replaced with new ones; the used filters/media are managed as hazardous waste. Hazardous waste generated by maintenance and repair activities is properly managed in accordance with state and federal law. The amount of waste generated varies based on the annual production of the site.

Would the project:

a. *Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?*

Potentially Significant Impact. The proposed Project would not include any new construction or expand processing capacity of the Approved Project. The proposed Project would not result in physical changes to the proposed Project site nor increase the maintenance of site equipment, including painting, welding of structures or equipment, and repair and servicing of process equipment and vehicles. Although proposed Project activities and throughput would not change from what was analyzed in the 1996 Certified EIR, the routine transport, use, and disposal of hazardous materials would need to be analyzed under recent regulations. Additional analysis will also be conducted to determine if any new significant or cumulatively considerable impacts could occur due to proposed Project operations. The analysis will also consider whether the proposed Project would result in a substantial increase in the severity of the previously identified significant effects in the 1996 Certified EIR, among other factors, as required by CEQA Guidelines Section 15162. As such, this issue will be evaluated further in the SEIR.

b. *Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?*

Potentially Significant Impact. In 2007, the Air Pollution Control System (APCS) suction hoods were placed directly on top of the Under Mill Oscillator (UMO) and directly connected to the shredder mill hood. The goal of this design was to capture as much of the exhaust as possible, but this also allowed sparks generated by the shredded metal to ignite the fumes inside the APCS ducting. As a result, an explosion occurred in the shredder in 2007.

This design flaw was corrected by enclosing the shredder structure with siding panels and moving the suction points to the top of the building, 55 feet above the UMO. This improved design allowed SA Recycling to capture all the exhaust generated by the shredder while preventing sparks generated from shredded metal to reach the APCS system. The current APCS is equipped with high speed abort gates and sensors that prevent an explosion from reaching and damaging critical components of the filtration system.

The proposed Project would not include any new construction nor expand processing capacity of the Approved Project. The proposed Project would not result in physical changes to the proposed Project site nor increase the maintenance of site equipment, including painting, welding of structures or equipment, and repair and servicing of process equipment and vehicles. However, as mentioned above, although the proposed Project activities and throughput would not change from what was analyzed in the 1996 Certified EIR, the routine transport, use or disposal of some hazardous materials could cause potential upset conditions that need to be further analyzed. Therefore, to adequately assess impacts, additional analysis will be conducted to determine if any new significant or cumulatively considerable impacts to the public could occur through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment due to proposed Project operations. The analysis will also consider whether the proposed Project would result in a substantial increase in the severity of the previously identified significant effects in the 1996 Certified EIR, among other factors, as required by CEQA Guidelines Section 15162. Therefore, this issue will be evaluated further in the SEIR.

c. *Emit hazardous emissions or involve handling hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?*

Less Than Significant Impact. No schools are within a quarter mile of the proposed Project site. The Certified EIR identified nine schools within a 3-mile radius. The nearest school is the George De La Torre Junior Elementary School, over 1.3 miles to the north-northwest. The proposed Project does not include any new construction, nor does it expand the processing capacity of the Approved Project. Therefore, the proposed Project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school. A less than significant impact would occur, and no significant new impact or substantial increase in the severity of a previously described impact would result from the proposed Project. This issue will not be addressed further in the SEIR.

d. *Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?*

Potentially Significant Impact. As with the Approved Project, the proposed Project site is currently undergoing groundwater monitoring and remediation. The proposed Project is also continuing with the ongoing free product recovery and groundwater monitoring and reporting actions. Although the proposed Project activities and throughput would not change from what was analyzed in the 1996 Certified EIR, this issue will be evaluated further in the SEIR.

e. *Be located within an airport land use plan area or, where such a plan has not been adopted, be within two miles of a public airport or public use airport, and result in a safety hazard or excessive noise for people residing or working in the project area?*

No Impact. The proposed Project is not in an airport land use plan area or within 2 miles

of a public airport or public use airport. The closest airport, Torrance Municipal Airport – Zamperini Field, is approximately 5.2 miles to the northwest of the proposed Project site. Therefore, no impact would occur, and no significant new impact or substantial increase in the severity of a previously described impact would result from the proposed Project. This issue will not be addressed further in the SEIR.

f. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Less Than Significant Impact. The 1996 Certified EIR determined that construction of the Approved Project would result in the disruption of emergency response during construction of the railroad spur to the Project site and provided three mitigation measures. The railroad spur to the Project site has been constructed and no additional construction is proposed under the proposed Project.

California Code of Regulations, Title 19, Section 2443 requires compliance with the Standardized Emergency Management System (SEMS) to "be documented in the areas of planning, training, exercise, and performance." POLA and the City of Los Angeles Emergency Management Division manage emergencies. Compliance with the SEMS has been documented by the Port for managing response to multiagency and multijurisdictional emergencies and to facilitate communications and coordination among all levels of the system and among all responding agencies. The Port of Los Angeles also follows the National Incident Management System (NIMS), a comprehensive system that improves local response operations using the Incident Command System (ICS) and the application of standardized procedures and preparedness measures. It promotes development of cross-jurisdictional, statewide, and interstate regional mechanisms for coordinating response and obtaining assistance during a large-scale or complex incident. NIMS incorporates incident management best practices developed and proven by thousands of responders and authorities across America. These practices, coupled with consistency and national standardization, are carried forward throughout all incident management processes, exercises, qualification and certification, communications interoperability, doctrinal changes, training, and publications, public affairs, equipping, evaluating, and incident management.

The proposed Project would not interfere with the above referenced emergency response plans and does not propose any new construction. The proposed Project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan, and a less than significant impact would occur. In addition, no significant new impact or substantial increase in the severity of a previously described impact would result from the proposed Project. Therefore, this issue will not be addressed further in the SEIR.

g. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?

No Impact. A wildland fire hazard area is typically characterized by areas with limited

access, rugged terrain, limited water supply, and combustible vegetation. The proposed Project site is in an urban, built-up area that is zoned for heavy industrial. The proposed Project site is in a fully developed portion of Terminal Island; therefore, there are no wildlands within or adjacent to the proposed Project site. Furthermore, the proposed Project area is not in a Fire Hazard Severity Zone (CAL FIRE 2020). There would be no impact for wildland fire risks due to implementation of the proposed Project, and no significant new impact or substantial increase in the severity of a previously described impact would result from the proposed Project. This issue will not be addressed further in the SEIR.

4.10 Hydrology and Water Quality

4.10.1 Summary of Impacts Identified in the Certified EIR

Hydrology and water quality were evaluated between two chapters in the Certified EIR: Chapter 3.2, *Soil and Groundwater*, and Chapter 3.4, *Hydrology, Water Quality, and Oceanography*.

Soil and Groundwater

The depth of groundwater at the proposed Project site was found to be between 6 and 12 feet below ground surface and is not potable. Weathered diesel fuel was identified beneath a gasoline storage and dispensing area and an adjacent warehouse building at the proposed Project site. This free phase product resulted from a leak in an underground diesel pipeline. A recovery system was installed in March 1991 to initiate recovery of the diesel fuel under the oversight of the LARWQCB. The Certified EIR determined that the potential for significant migration of the diesel fuel and any dissolved constituents by advection was small.

Groundwater investigations during the preparation of the Certified EIR determined that groundwater on site was not significantly impacted by operations on the proposed Project site other than the diesel leak. Although there is a free product plume underneath the site, groundwater monitoring and free product recovery continues to occur, and free product continues to be recovered.
No free product was observed on the groundwater except in areas of the gasoline underground storage tanks and dispensing island. Minor organics were found in the groundwater, but the concentrations were not considered a threat to the environment and metals were found only in minor concentrations.

The Certified EIR determined that construction activities associated with the Approved Project and site improvements, such as stormwater collection and treatment facilities, pavement of the entire surface, and remediation activities, would be considered minor in scope. The Certified EIR found that implementation of the Approved Project would reduce the potential for impacts to soil and groundwater during site operation to a level of insignificance, since site improvements included replacement of underground fuel storage tanks with aboveground tanks, pavement of the entire site surface, and implementation of a stormwater collection and treatment system. The continued operation of the Approved Project site would not impact water supplies.

The operation of the Approved Project also included the ongoing recovery of the diesel free product under oversight of the LARWQCB, which has had a positive impact on soil and groundwater quality. An objective of the Approved Project was to remediate soil and groundwater contamination at the Approved Project site to current acceptable regulatory levels.

The Approved Project was found to not result in any unavoidable adverse impacts, and cumulative impacts to soil and groundwater would also be beneficial. No mitigation measures were proposed.

Hydrology, Water Quality, and Oceanography

The Certified EIR states that flooding is a minimal threat to the Approved Project, and the Approved Project would not alter the 100-year floodwater flow. Possible sources of contaminants from the Approved Project included scrap metal falling into the harbor waters during ship loading, runoff from the site, and dust from storage piles, site operations, or generated from loading operations. A SWPPP and monitoring program were in effect on site for the management of stormwater runoff and included a number of pollution prevention measures. The Certified EIR described improvements of the Approved Project as minor in scope.

Measures to comply with the LARWQCB storm water permit for construction activities would prevent erosion from remediation and construction activities. Remediation and construction activities were not expected to significantly alter runoff rates. Construction of the Approved Project could increase levels of contaminants and turbidity and result in release of soil and other contaminants into harbor waters. The SWPPP would reduce impacts of contaminated stormwater runoff from the Approved Project site and ensure that construction impacts of the Approved Project were less than significant. Additionally, minor maintenance dredging during construction was found to be short term and not significant. The Certified EIR found that the deepening of the water depth at Berths 210 and 211 by 2 feet would be insignificant.

During operation, the improvements to the stormwater control system on site as part of the Approved Project would improve on-site drainage and help reduce the area of temporary flooding during storm events.

Implementation of the Approved Project was found to eliminate or reduce the potential for contamination during operation of the Approved Project, including complete soil remediation, complete paving of the Approved Project site, implementation of the SWPPP, and operation of three stormwater retention basins and treatment site.

Impacts related to the operation of the Approved Project were determined to be less than significant. Additionally, no cumulative impacts to hydrology, water quality, or oceanography of the harbor area would result from the implementation of the Approved Project. No mitigation measures were proposed related to hydrology, water quality, and oceanography.

Tsunamis and Seiches

The potential for tsunamis was evaluated in Chapter 3.1, Geology. The Certified EIR found that due to the Approved Project site's location and elevation (7 to 13 feet above mean sea level), and to the distance between the site and the tectonic environment required to produce tsunamigenic earthquakes, these types of seismic hazards were determined to be insignificant at the Project site.

4.10.2 Impacts Associated with the Proposed Project

Environmental Issues	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than Significant Impact	No Impact
Would the project: a. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?	X			
b. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?			X	
c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner that would: 1. Result in substantial erosion or siltation on or off site;			X	
2. Substantially increase the rate or amount of surface runoff in a manner that would result in flooding on or off site;				X
3. Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or				X
4. Impede or redirect flood flows?			X	
d. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	X			
e. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?				X

Discussion

Would the project:

a. *Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?*

Potentially Significant Impact. The remediation of the diesel contamination under the oversight of LARWQCB and discussed in the Certified EIR is an ongoing activity at the proposed Project site and would continue under the proposed Project. The proposed Project would further continue to implement the current SWPPP. The proposed Project involves an amendment to the existing permit to allow for the existing scrap metal recycling site to operate for an additional 10 years, and does not include any new construction or uses that would impact water or groundwater quality. However, impacts related to water quality standards, waste discharge requirements, and the potential presence of emerging chemicals (i.e., PFAS) have the potential to result in significant impacts. For instance, any needed cleanup of the proposed Project site in the event of site

inundation would have the potential to degrade surface waters and could potentially cause significant environmental impacts as a result of the accidental release, spill, or explosion of hazardous materials. Therefore, to adequately assess impacts, additional analysis will be conducted to determine if any new significant or cumulatively considerable impacts could occur due to proposed Project operations. The analysis will also consider whether the proposed Project would result in a substantial increase in the severity of the previously identified significant effects in the 1996 Certified EIR, among other factors, as required by CEQA Guidelines Section 15162. This issue will be further evaluated in the SEIR.

b. *Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?*

Less-than-Significant Impact. Neither the proposed Project nor the proposed Project site draw on groundwater. The Approved Project included a number of site improvements, including the paving of the site, eliminating any possible impact on groundwater. The proposed Project involves an amendment to the existing permit to allow for the continued use of the scrap metal recycling site for an additional 10 years and would not include any new construction or new uses that may impact groundwater supplies or interfere with groundwater recharge. Therefore, the proposed Project would not decrease groundwater supplies or interfere with groundwater recharge. Consistent with the Certified EIR, a less than significant impact would occur, and no significant new impact or substantial increase in the severity of a previously described impact would result from the proposed Project. Therefore, this issue will not be addressed further in the SEIR.

c. *Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner that would:*

1. *Result in substantial erosion or siltation on or off site?*

Less Than Significant Impact. The proposed Project would not include any new construction or uses on site that may alter the existing drainage pattern of the site. The proposed Project would not alter the course of a stream or river. It would continue to implement with the current SWPPP. Therefore, implementation of the proposed Project would not alter existing drainage pattern of the site nor of the proposed Project area. Consistent with the Certified EIR, a less than significant impact would occur, and no significant new impact or substantial increase in the severity of a previously described impact would result from the proposed Project. This issue will not be addressed further in the SEIR.

2. *Substantially increase the rate or amount of surface runoff in a manner that would result in flooding on or off site?*

No Impact. The proposed Project would not modify the site's existing drainage patterns conditions. Similar to existing conditions, the proposed Project site would remain predominantly paved. The landscaped area near the office building would minimize

stormwater runoff rates and volume and would treat stormwater runoff through biological uptake. Stormwater runoff at the site would comply with applicable requirements under the existing SWPPP. No impacts related to alteration of drainage patterns, resulting in flooding, would occur. Therefore, no impact would occur, and no significant new impact or substantial increase in the severity of a previously described impact would result from the proposed Project. This issue will not be addressed further in the SEIR.

3. *Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?*

No Impact. The proposed Project would not modify the site's existing drainage patterns conditions. Similar to existing conditions, the proposed Project site would remain predominantly paved. The landscaped area near the office building would minimize stormwater runoff rates and volume and would treat stormwater runoff through biological uptake. Stormwater runoff at the site would comply with applicable requirements under the existing SWPPP. The proposed Project would not exceed the capacity of the existing stormwater drainage systems on site or provide substantial additional sources of polluted runoff. No impacts would occur, and no significant new impact or substantial increase in the severity of a previously described impact would result from the proposed Project. This issue will not be addressed further in the SEIR.

4. *Impede or redirect flood flows?*

Less Than Significant Impact. Flooding hazard at the proposed Project site was determined to be minimal and insignificant. The proposed Project would not alter the 100-year floodwater flow. The proposed Project would not include any changes that would affect flooding hazards. Therefore, a less than impact would occur, and no significant new impact or substantial increase in the severity of a previously described impact would result from the proposed Project. This issue will not be addressed further in the SEIR.

d. *In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?*

Potentially Significant Impact. According to Federal Emergency Management Agency's (FEMA's) Flood Hazard Map FM06037C1944G, the proposed Project site is located outside Zone AE which is identified as Special Flood Hazard Area subject to inundation by the one percent annual chance flood, also known as the base flood, which has a one percent chance of being equaled or exceeded in any given year (FEMA 2008). Seiches and Tsunamis are seismically induced water waves that could occur in the harbor as a result of earthquakes. The proposed Project would not increase operations at the proposed Project site and does not involve the construction of habitable structures. In addition, the proposed Project would be required to adhere to all Homeland Security, Port Police, and LAFD emergency response and evacuation regulations, ensuring compliance with existing emergency response plans. Therefore, implementation of the proposed Project would not interfere with an existing emergency

response or evacuation plan or increase the risk of injury or death, and impacts would be less than significant. A Port Complex model that assessed tsunami and seiche scenarios determined as unlikely the potential for these events; therefore, the potential for spilled hazardous materials from the proposed Project site during a tsunami or seiche is expected to be relatively low. However, any needed cleanup of the proposed Project site in the event of site inundation would have the potential to cause significant environmental impacts and may result in a substantially increased public health and safety concerns as a result of the accidental release, spill, or explosion of hazardous materials due to a tsunami or seiche. To adequately assess impacts, additional analysis will be conducted to determine if any new significant or cumulatively considerable impacts to the public could occur due to proposed Project operations. The analysis will also consider whether the proposed Project would result in a substantial increase in the severity of the previously identified significant effects in the 1996 Certified EIR, among other factors, as required by CEQA Guidelines Section 15162. Therefore, this issue will be further evaluated and addressed in the SEIR.

e. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

No Impact. Responsibility for the protection of surface water and groundwater quality in California rests with the State Water Resources Control Board (SWRCB) and nine Regional Water Quality Control Boards (RWQCB). Regional-specific water quality regulations are contained in Water Quality Control Plans that recognize regional beneficial uses, water quality characteristics and water quality problems. The proposed Project area is not located in an area designated for a water quality control plan or sustainable groundwater management plan. Therefore, the proposed Project would not interfere with any water quality or groundwater management plan. In addition, no change would occur to the existing storm drain system, and the proposed Project would continue to comply with the BMPs in the existing SWPPP. No impacts would occur, and this impact will not be evaluated further in the EIR.

4.11 Land Use and Planning

4.11.1 Summary of Impacts Identified in the Certified EIR

The Certified EIR did not evaluate the land use and planning topic.

4.11.2 Impacts Associated with the Proposed Project

Environmental Issues	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than Significant Impact	No Impact
Would the project: a. Physically divide an established community?				X
b. Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?				X

Discussion

Would the project:

a. *Physically divide an established community?*

No Impact. The proposed Project includes an amendment to an existing permit that will allow the existing use to operate for an additional 10 years. The proposed Project does not include any new construction. The proposed Project site also does not include any established communities. Therefore, the proposed Project would not physically divide an established community, and no impact would occur. No significant new impact or substantial increase in the severity of a previously described impact would result from the proposed Project. As such, this issue will not be addressed further in the SEIR.

b. *Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?*

No Impact. The proposed Project site is zoned qualified heavy industrial (Heavy Industrial with Height District 1 ([Q]M3-1) and has a General Plan Land Use designation of General/Bulk Cargo (Non-Hazardous Industrial and Commercial) (Los Angeles 2020). Height District 1 does not provide a height limit for manufacturing designations but restricts floor area ratio (FAR) of 1.5 to 1.

The PMP guides future development and expansion of the Port of Los Angeles (Los Angeles 2018). The proposed Project site and the surrounding uses are in Planning Area 3, Terminal Island (Los Angeles 2018) of the PMP. Planning Area 3, the largest planning area, consists of all of Terminal Island with the exception of Fish Harbor and contains six of the Port's nine container terminals. The PMP designates the proposed Project site "Mixed Land Use: [B210-B211] Container/Dry Bulk."

The proposed Project site currently operates as a scrap metal recycling site. Prior to SA Recycling taking over operations at the proposed Project site, the Hugo Neu-Proler Company and then Sims Metal Management operated a scrap metal recycling site at the proposed Project site since the early 1960s.

The proposed Project includes an amendment to Permit No. 750 to allow for the continuation of the scrap metal operation at the proposed Project site. The scrap metal site is currently operating under Permit No. 750 as it was analyzed in the Certified EIR. The proposed Project would be consistent with the existing zoning and land use designation on the proposed Project site. No new construction or expansion of the existing proposed Project site nor processing capacity is proposed. The proposed Project would also not conflict with any land use plan, policy or regulation for the proposed Project site. As such, no impact would occur, and no significant new impact or substantial increase in the severity of a previously described impact would result from the proposed Project. This issue will be not be addressed further in the SEIR.

4.12 Mineral Resources

4.12.1 Summary of Impacts Identified in the Certified EIR

The proposed Project site is on a man-made fill area consisting of dredge sediments from Los Angeles Harbor. The proposed Project site is not used for oil production, only industrial scrap metal operations. The Certified EIR did not evaluate the loss of availability of mineral resources.

4.12.2 Impacts Associated with the Proposed Project

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

Discussion

Would the project:

a. *Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?*

No Impact. The proposed Project site is currently used as a scrap metal recycling site. Prior to SA Recycling taking over operations, Hugo Neu-Proler Company and then Sims Metal Management operated the scrap metal recycling site beginning in the early 1960s. The proposed Project site is not used for mineral extraction. Additionally, the proposed Project site is not in a mineral resource zone 2 (MRZ-2), which designates areas where significant mineral deposits are present or where it is judged that a high likelihood exists for their presence (Miller 1994; Kohler 2010). The California Department of Conservation's Well Finder map identifies plugged oil and gas wells on the northwestern corner and southwestern corner of the proposed Project site (DOC 2020b). The proposed Project would not include new construction or changes to Approved Project operations. Therefore, the proposed Project would not result in the loss of availability of known mineral resources that would be a value to the region or state. No impact would occur, and no significant new impact or substantial increase in the severity of a previously described impact would result from the proposed Project. This issue will not be addressed further in the SEIR.

a. Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?

No Impact. The proposed Project site is not currently used as a mineral resource recovery site. The City of Los Angeles Conservation Element does not identify it as being within an oil drilling district, state designated oil field, or in an MRZ-2 zone (City of Los Angeles 2001). The proposed Project would not include new construction or changes to Approved Project operations. Therefore, the proposed Project would not result in the loss of availability of locally important mineral resources delineated on a local general plan, specific plan, or other land use plan. Therefore, no impact would occur, and no significant new impact or substantial increase in the severity of a previously described impact would result from the proposed Project. This issue will not be addressed further in the SEIR.

4.13 Noise and Vibration

4.13.1 Summary of Impacts Identified in the Certified EIR

Section 3.7, *Noise*, of the Certified EIR determined that the construction of Approved Project would not produce a noise impact at off-site receptors. Operation of the Approved Project would result in processing noise and ship-loading noise. Processing activities included receiving, sorting, shredding, shearing, and stockpiling scrap metal.

The Certified EIR determined that changes to operation caused by the Approved Project—including the increase in processing from 950,000 to up to 1,300,000 tons per year of scrap metal, reintroducing rail service, and ship loading—would result in a slight increase in noise (about 1.4 decibels (dBA)) that would not be considered significant because it would be below the 3 dBA threshold. The Approved Project included two project features to reduce operational noise: the construction of a barrier and the application of a damping material on the deflection plate. These features would further reduce maximum noise levels at nearby receptors. The Approved Project would increase truck and rail cars trips. The Certified EIR determined that the additional truck trips would be insignificant and would result in no increase over existing average noise levels along streets serving the Project site. The Approved Project's addition of rail cars was further found to represent an insignificant increase in rail traffic past residential areas. No new receptors would be impacted, and receptors currently subject to rail noise would not be able to detect any difference in the level of rail-generated noise. Noise impacts along the existing rail lines were therefore determined to be less than significant.

Additionally, the potential impact from vibration caused by the addition of the Approved Project's rail cars was found to be less than significant. With regard to cumulative impacts, the Certified EIR determined that given the industrialized nature of the Approved Project site and vicinity, the anticipated cumulative increase would not be significant. No mitigation measures were proposed.

4.13.2 Impacts Associated with the Proposed Project

Environmental Issues	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than Significant Impact	No Impact
Would the project: a. Generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in a local general plan or noise ordinance or applicable standards of other agencies?			X	
b. Generate excessive groundborne vibration or groundborne noise levels?			X	
c. Be located within the vicinity of a private airstrip or an airport land use plan, or, where such a plan has not been adopted, within two miles of a public airport or public use airport and expose people residing or working in the project area to excessive noise levels?				X

Discussion

Would the project:

a. *Generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in a local general plan or noise ordinance or applicable standards of other agencies?*

Less-than-Significant Impact. The proposed Project includes an amendment to an existing permit to allow the existing use to continue for an additional 10 years. It does not propose any new construction or changes to the approved operations at the proposed Project site. Therefore, the proposed Project would not result in any new construction or operational noise sources that could increase ambient noise levels. Furthermore, additional noise dampening features have been added that have reduced noise levels on site and at the nearest receptors.

Noise dampening in the shredder and non-ferrous plant is aided by structural walls and metal siding. Additionally, various transition points in the conveyor belt system are equipped with rubber panels to absorb impacts and dampen noise. Noise impacts have been significantly reduced since the analysis in the Certified EIR. Consistent with the Certified EIR, a less than significant impact would occur and no significant new impact or substantial increase in the severity of a previously described impact would result from the proposed Project. Therefore, this issue will not be evaluated in the SEIR.

b. *Generate excessive groundborne vibration or groundborne noise levels?*

Less-than-Significant Impact. The proposed Project would not include any new construction or operations that could generate excessive groundborne vibration or noise levels. In addition, the proposed Project site is over 1,000 feet from the nearest residential buildings. Consistent with the Certified EIR, a less than significant impact would occur, and no significant new impact or substantial increase in the severity of a previously described impact would result from the proposed Project. this issue will not be addressed further in the SEIR.

c. *Be located within the vicinity of a private airstrip or an airport land use plan, or, where such a plan has not been adopted, within two miles of a public airport or public use airport and expose people residing or working in the project area to excessive noise levels?*

No Impact. The proposed Project site is not within a 2-mile radius of any airport. The closest airport, Torrance Municipal Airport – Zamperini Field, is approximately 5.2 miles from the proposed Project site. Additionally, the proposed Project site is not in the vicinity of a private airstrip. As a result, the proposed Project would not expose people residing or working in the proposed Project area to excessive noise related to airports or private airstrips. Therefore, no impact would occur, and no significant new impact or substantial increase in the severity of a previously described impact would result from the proposed Project. This issue will not be addressed further in the SEIR.

4.14 Population and Housing

4.14.1 Summary of Impacts Identified in the Certified EIR

The Certified EIR determined that the Approved Project was not expected to result in any marked change in the population of the region or increase the need for or affect area housing. The Approved Project site is in an area zoned for heavy industry (M3) with no residential housing at the site or in the vicinity of the site. The Approved Project would not change the population or housing patterns of the area. The Approved Project would not result in any significant adverse impacts on population and housing, and no mitigation measures were required.

4.14.2 Impacts Associated with the Proposed Project

Environmental Issues	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than Significant Impact	No Impact
Would the project: a. Induce substantial unplanned population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure)?			X	
b. Displace a substantial number of existing people or housing, necessitating the construction of replacement housing elsewhere?			X	

Discussion

Would the project:

a. *Induce substantial unplanned population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure)?*

Less Than Significant Impact. The proposed Project would not include any new construction and would not expand processing capacity beyond what was previously approved under the Approved Project. Therefore, the proposed Project would not generate the need for new employees, which could contribute to population growth in the area. Additionally, since the proposed Project would not include any construction, it would not extend roads or construct new infrastructure. Therefore, the proposed Project would not directly or indirectly induce population growth, and consistent with the Certified EIR, a less than significant impact would occur. No significant new impact or substantial increase in the severity of a previously described impact would result from the proposed Project, and this issue will not be addressed further in the SEIR.

b. Displace a substantial number of existing people or housing, necessitating the construction of replacement housing elsewhere?

Less Than Significant Impact. The proposed Project site is developed with a scrap metal recycling site, and no existing homes or residential units exist on the proposed Project site. The proposed Project would not displace existing persons or housing. Consistent with the Certified EIR, impacts would be less than significant, and no significant new impact or substantial increase in the severity of a previously described impact would result from the proposed Project. This issue will not be addressed in the SEIR.

4.15 Public Services

4.15.1 Summary of Impacts Identified in the Certified EIR

Potential impacts related to public services were discussed in Section 3.9, *Public Services*, of the Certified EIR. The City of Los Angeles Fire Department (LAFD) provides fire protection services for the Port of Los Angeles. The Los Angeles Police Department (LAPD) and the Port of Los Angeles Port Police serve the Approved Project site. The Approved Project would meet fire codes and LAFD requirements. The Approved Project would not increase fire hazard on the Approved Project site. The Approved Project site has secured land access consisting of gated entrances and fences and is monitored by a security guard. The Certified EIR stated that the Approved Project would not be expected to impact schools, parks, hospitals, or other government services. No significant impacts were identified, and no mitigation measures were proposed.

4.15.2 Impacts Associated with the Proposed Project

Environmental Issues	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than Significant Impact	No Impact
Would the Project: a. Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities or a need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the following public services: 1. Fire protection?			X	
2. Police protection?			X	
3. Schools?				X
4. Parks?				X
5. Other public facilities?				X

Discussion

Would the project:

c. *Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities or a need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the following public services:*

1. *Fire protection?*

Less Than Significant Impact. LAFD currently provides fire protection and emergency

services to the proposed Project site and surrounding area. LAFD facilities in the Port include land-based fire stations and fireboat companies. The nearest station with direct fireboat access is Fire Station No. 112 in the Main Channel, about 2 miles west of the proposed Project site. The approximate travel distance to the proposed Project site is about 2.5 miles. The closest station with land access is Fire Station No. 24, which is located approximately 2,500 feet to the east of the site at 111 Pier S. Avenue. The approximate travel distance to the proposed Project site is approximately 0.5 mile. This station is on Terminal Island is equipped with a single engine company, an assessment engine, a rescue ambulance, and a rehab air tender. This station would provide fire service by land.

The proposed Project does not propose any new construction and would not change or expand the processing capacity of the scrap metal processing site on site. Additionally, significant improvements have been made to the on-site fire suppression systems since the completion of the Certified EIR. Furthermore, the proposed Project's operation would occur within the proposed Project site and harbor and would not affect service ratios, response times, or other performance objectives of LAFD. Furthermore, the proposed Project would not warrant construction or additional fire department facilities. Therefore, the proposed Project would not generate an additional fire protection need or a new demand for fire protection facilities, and consistent with the Certified EIR, a less than significant impact would occur, and no significant new impact or substantial increase in the severity of a previously described impact would result from the proposed Project. This issue will not be further addressed in the SEIR.

2. Police protection?

Less Than Significant Impact. The City of Los Angeles Police Department (LAPD) and Port Police provide police services at the Port, with the latter being the primary law enforcement agency within the Port. Specifically, Port Police officers are responsible for patrol and surveillance within the Port's boundaries, including Port-owned properties in the communities of Wilmington, San Pedro, and Harbor City. Port Police officers maintain 24-hour land and water patrols and enforce federal, state, and local public safety statutes, Port tariff regulations, and environmental and maritime safety regulations. The Port Police headquarters is at 330 South Centre Street in San Pedro.

Although Port Police are the first responders in an emergency, LAPD is also responsible for police services in the proposed Project vicinity because the Port is part of the city of Los Angeles. The LAPD Harbor Division is at 2175 John S. Gibson Boulevard in San Pedro, which is approximately 2.1 miles west of the proposed Project site. The Harbor Division is responsible for patrols throughout San Pedro, Harbor City, and Wilmington.

The proposed Project does not propose any new construction and would not change nor expand the processing capacity of the scrap metal processing site on site. Therefore, the proposed Project would not generate an additional police protection need or new demand for police facilities. The proposed Project would also be the same distance from service providers as the existing facilities and, therefore, would not increase emergency

response times. It would not alter terminal activities, increase long-term employment, or result in indirect growth such that additional police protection would be necessary. Therefore, consistent with the Certified EIR, impacts would be less than significant, and no significant new impact or substantial increase in the severity of a previously described impact would result from the proposed Project. This issue will not be addressed further in the SEIR.

3. Schools?

No Impact. No residential uses are associated with the proposed Project, and operation of the proposed Project would not affect school enrollment. George de la Torre Junior Elementary School is located approximately 1.3 miles to the north north-west of the proposed Project site. However, the proposed Project does not propose any new construction nor expand the processing capacity of the scrap metal processing site on site. Therefore, the proposed Project would not result in new employees and would not generate a demand for new school facilities, and no impact would occur. In addition, no significant new impact or substantial increase in the severity of a previously described impact would result from the proposed Project. This issue will not be further addressed in the SEIR.

4. Parks?

No Impact. The proposed Project does not propose any new construction and would not change or expand the processing capacity of the scrap metal processing site on site. Therefore, no impacts on current parks are expected and the proposed Project would not create a need for any new parks. the proposed Project would not result in new employees and potentially generate a new demand on parks. Consequently, no impact would occur, and no significant new impact or substantial increase in the severity of a previously described impact would result from the proposed Project. This issue will not be further addressed in the SEIR.

5. Other public facilities?

No Impact. Similar to the discussion above, the proposed Project would not include new construction or any changes or expansion to the scrap metal recycling site on site. Therefore, the proposed Project would not generate a new demand on other public services, including but not limited to libraries and hospitals. No significant new impact or substantial increase in the severity of a previously described impact would result from the proposed Project. This issue will not be further addressed in the SEIR.

4.16 Recreation

4.16.1 Summary of Impacts Identified in the Certified EIR

Potential impacts related to recreation were discussed in Section 3.12, *Recreation*, of the Certified EIR. There are no recreational facilities near the proposed Project site because the area is primarily devoted to industrial uses, including commercial shipping; liquid, dry bulk, and general cargo handling; heavy industrial uses; and institutional commercial activities. The Certified EIR determined that the operation and maintenance of the Approved Project would not have any direct effect on recreational uses within the Port. The Approved Project would not affect recreational boating use within the harbor. No mitigation measures were proposed.

4.16.2 Impacts Associated with the Proposed Project

Environmental Issues	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than Significant Impact	No Impact
Would the Project: a. Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?			X	
b. Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?				X

Discussion

Would the project:

a. *Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?*

Less Than Significant Impact. No parks exist on Terminal Island . Wilmington Waterfront Park is the closest park to the proposed Project site and is approximately 1.2 miles northwest of the proposed Project site. On Terminal Island, the closest open space is Reeves Field, about 0.4 mile south of the proposed Project site. The proposed Project would not result in any new construction nor expand existing uses on site. The proposed Project would not generate new employees that could use area parks and vessel trips to and from the proposed Project site. Therefore, the proposed Project would not increase the use of existing neighborhood and regional parks or other recreational facilities. Consistent with the Certified EIR, a less-than-significant impact would occur and no significant new impact or substantial increase in the severity of a previously described impact would result from the proposed Project. This issue will not be further addressed in the SEIR.

b. Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?

No Impact. The proposed Project involves an amendment to an existing permit that will allow for an existing scrap metal recycling site to continue operation for an additional 10 years. The site does not include any recreational facilities. The proposed Project would not include new construction nor expand operations at the proposed Project site that could generate new employees. Thus, the proposed Project would not generate any new residential development that would require construction or expansion of recreational facilities. Therefore, no impact would occur, and no significant new impact or substantial increase in the severity of a previously described impact would result from the proposed Project. This issue will not be addressed further in the SEIR.

4.17 Transportation

4.17.1 Summary of Impacts Identified in the Certified EIR

Section 3.6, *Transportation and Circulation*, of the Certified EIR determined that the Approved Project would generate a total of 954 average daily trips, 162 AM peak hour trips, and 16 PM peak hour trips. The Certified EIR determined that the Approved Project would not result in significant impacts to roadway links in the study area. The Certified EIR determined that the Approved Project would not have any impact on-site access, and the EIR determined that there was no long-term on-site parking demand for trucks, and there would not be any significant impacts to on-site traffic circulation. Additionally, the Approved Project was found to add fewer than 50 trips during the peak hours and was therefore found to be consistent with the Los Angeles County Congestion Management Program (CMP) and with regional plans.

The Approved Project was found to generate an additional demand for rail-car movements on the tracks that provide access to Terminal Island. The Approved Project would generate a demand for 13 rail car movements on an average day. This rail activity was found to have a less than significant impact on rail operations, since the addition of 14 to 26 cars per day would be negligible compared to the level of rail activity on tracks serving the Port area and the capacity of the railroad system. With regard to railroad/roadway at-grade crossings, a typical scenario would result in a traffic blockage duration increase of approximately 7 seconds at each rail crossing. Since 7 seconds of blockage would not likely create an unacceptable increase in delay or queuing, the Approved Project was found to not have a significant rail impact.

Additionally, the Approved Project's new at-grade crossing at the proposed rail spur to the Approved Project site would cross New Dock Street. The Certified EIR determined that the construction of the rail spur would disrupt access to the Approved Project site, and provided three mitigation measures. The Certified EIR determined that the operation of this crossing would result in traffic impacts with the switching movement to transport rail cars in/out of the site; however, such impacts would be less than significant. The Certified EIR determined that the additional rail cars associated with the Approved Project would not result in increased frequency of accidents.

With regards to marine vessel operations, it was determined that the Approved Project would result in 14 additional ship calls per year, for a total of 41 total ships per year. The addition of 14 annual ships was found to be negligible and would not result in any significant impact to marine traffic or safety.

4.17.2 Impacts Associated with the Proposed Project

Environmental Issues	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than Significant Impact	No Impact
Would the Project:				X

Environmental Issues	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than Significant Impact	No Impact
a Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?				
b. Conflict or be inconsistent with State CEQA Guidelines Section 15064.3, subdivision (b)?				X
c. Substantially increase hazards because of a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?				X
d. Result in inadequate emergency access?			X	

Discussion

Would the project:

a. *Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?*

No Impact. The Certified EIR determined that the Approved Project was consistent with local and regional plans.

The 2020 Los Angeles Department of Transportation (LADOT) Transportation Assessment Guidelines state that a project that "generally confirms with and does not obstruct the City's development policies and standards will generally be considered to be consistent" and not in conflict. The 2020 LADOT Transportation Assessment Guidelines include three screening criteria questions to help determine whether a project conflicts with City of Los Angeles circulation system policies. If the answer is "no" to all of the following questions, a "no impact" determination can be made for this threshold (Caltrans 2020).

i. Does the project require discretionary action that requires the decision maker to find that the project would substantially conform to the purpose, intent, and provisions of the general plan?

The proposed Project requires approval by the Board of Harbor Commissioners, which is a discretionary action. However, this discretionary action does not require the decision maker to amend any project component to conform to the purpose, intent, or provision of any existing general plan. Therefore, the proposed Project would comply with all required City of Los Angeles circulation system policies and does not deviate from any general plan.

ii. Is the project known to directly conflict with a transportation plan, policy or program adopted to support multimodal transportation options or public safety?

The proposed Project would not alter existing transportation routes or options, nor would it affect public safety. The proposed Project would not require any modifications or closures to the public right-of-way, and no in-street construction activities would occur.

There are roadway modification projects that are planned for completion prior to commencement of the operations associated with the proposed Project. Based on preliminary design and schedule, LAHD does not foresee these roadway projects conflicting with the proposed Project. Further, the development and operation of the proposed projects would not prevent street closures that result from the construction of other projects. The proposed Project would not include any changes to the operation at the proposed Project site. It would not generate new vehicle, marine vessel, or rail trips since it would not expand or alter operations at the proposed Project site beyond what was previously evaluated and approved under the Certified EIR. Thus, the proposed Project would not conflict with a transportation plan, policy, or program adopted to support multimodal transportation options or public safety.

iii. Is the project required to or proposing to make any voluntary or required modifications to the public right-of-way (e.g., dedications and/or improvements in the right-of-way, reconfiguration of curb line)?

The proposed Project does not include any modifications to existing roadways that support current of future bike lanes or bus stops and is not required to make any voluntary or required modifications to the public right-of-way. The proposed Project would not include dedications or physical modifications to the public right-of-way, nor is it required. The proposed Project also does not include any in-street construction activities.

Accordingly, the proposed Project would not conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities. No impacts would occur beyond what was analyzed in the Certified EIR, and no impact would occur and no significant new impact or substantial increase in the severity of a previously described impact would result from the proposed Project. Therefore, this issue will not be evaluated further in the SEIR.

b. Conflict or be inconsistent with State CEQA Guidelines Section 15064.3, subdivision (b)?

No Impact. The proposed Project includes an amendment to an existing permit that will allow for the extension of the existing use of the proposed Project site for 10 years. No expanded operations or new construction is proposed that could lead to additional vehicle trips. Current volumes do not exceed those discussed in the Certified EIR. Therefore, implementation of the proposed Project would not conflict or be inconsistent with State CEQA Guidelines Section 15064.3, subdivision (b). Therefore, no impacts would occur and no significant new impact or substantial increase in the severity of a previously described impact would result from the proposed Project. This issue will not be evaluated further in the SEIR.

c. Substantially increase hazards because of a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

No Impact. The proposed Project site currently operates as a scrap metal recycling site, and the proposed Project would amend the existing permit to allow this use to continue for an additional 10 years. The proposed Project does not include any new construction or changes to the operation of the scrap metal recycling site. The Certified EIR determined

that the Approved Project would not generate safety concerns related to increased marine vessel activity nor result in increased accident frequency due to the at-grade crossing. Since the proposed Project would not include any physical changes to the Approved Project, the proposed Project would not have the potential to result in new hazards due to geometric design features or incompatible uses. The proposed Project does not involve or require any changes to the geometric design of any streets within the proposed Project area. In addition, no in-water work is proposed or required as part the proposed Project that would alter marine transportation operations. The proposed Project would not increase ground or marine transportation hazards, and consistent with the Certified EIR, a less than significant impact would occur. No significant new impact or substantial increase in the severity of a previously described impact would result from the proposed Project. Therefore, this issue will not be addressed further in the SEIR.

d. Result in inadequate emergency access?

Less-than-Significant Impact. The Certified EIR determined that construction of the railroad spur to the proposed Project site would disrupt access to the proposed Project site during construction. The Certified EIR determined that the operation of the Approved Project would have adequate site access and would not result in significant transportation impacts relating at vehicles, rail, and marine vessels. Emergency access to the site would be provided via existing driveways and on roads leading to the proposed Project site. As discussed above, the Port of Los Angeles and the City of Los Angeles Emergency Management Division manage emergencies. Compliance with the SEMS has been documented by the Port for managing response to multiagency and multijurisdictional emergencies and to facilitate communications and coordination among all levels of the system and among all responding agencies. The Port of Los Angeles also follows the NIMS, a comprehensive system that improves local response operations using the ICS and the application of standardized procedures and preparedness measures. It promotes development of cross-jurisdictional, statewide, and interstate regional mechanisms for coordinating response and obtaining assistance during a large-scale or complex incident. NIMS incorporates incident management best practices developed and proven by thousands of responders and authorities across America. These practices, coupled with consistency and national standardization, are carried forward throughout all incident management processes, exercises, qualification and certification, communications interoperability, doctrinal changes, training, and publications, public affairs, equipping, evaluating, and incident management.

The proposed Project will not interfere with these emergency response plans. The proposed Project would not include any new expanded operations at the proposed Project site and does not propose any new construction that could change existing emergency access. The proposed Project would also not impair implementation of or physically interfere these adopted emergency response plan or emergency evacuation plans. Therefore, a less-than-significant impact would occur, and no significant new impact or substantial increase in the severity of a previously described impact would occur. This issue will not be addressed further in the SEIR.

4.18 Tribal Cultural Resources

4.18.1 Summary of Impacts Identified in the Certified EIR

Tribal cultural resources were not evaluated in the Certified EIR.

4.18.2 Impacts Associated with the Proposed Project

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

Discussion

Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

a. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k)?

No Impact. The proposed Project site is not listed on the California Register of Historical Resources (OHP 2020). Similar to the discussion for Threshold 4.5(b) regarding archaeological resources, the proposed Project site is underlain by artificial fill from the early 1900s, and therefore the presence of tribal cultural resources on site is unlikely. Additionally, the proposed Project does not include any construction or demolition activities that may affect tribal cultural resources. Therefore, the proposed Project would not have the potential to affect tribal cultural resources that are listed or eligible for listing in the California Register of Historical Resources.

LAHD provided notification of the proposed Project (dated November 21, 2019), pursuant to the provisions of AB 52 and PRC Section 21080.3.1(d) to six California Native tribes. No responses were received within the 30-day consultation request period, which ended on December 20, 2019. The proposed Project would not cause a change in the significance of a tribal cultural resource listed or eligible for listing in the California Register of Historical Resources or in a local register of historical resources, as defined in PRC Section 5020.1(k). Therefore, no impact would occur, and no significant new impact or substantial increase in the severity of a previously described impact would result from the proposed Project. This issue will not be addressed further in the SEIR.

b. *A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1?*

No Impact. As discussed above, LAHD sent formal consultation requests (dated November 21, 2019) to six California Native American tribal contacts. No responses were received.

Senate Bill 18 (SB 18) requires tribal consultation when a new General Plan or Specific Plan is proposed or an amendment to a General Plan or Specific Plan is proposed. Since the proposed Project does not include a general plan or specific plan amendment, the proposed Project is not subject to SB 18. No significant new impact or substantial increase in the severity of a previously described impact would occur**.** No tribal cultural resources have been identified in or within a 0.25-mile radius of the proposed Project site. Therefore, no impact would occur, and no significant new impact or substantial increase in the severity of a previously described impact would result from the proposed Project. This issue will not be addressed further in the SEIR.

4.19 Utilities and Service Systems

4.19.1 Summary of Impacts Identified in the Certified EIR

Potential impacts related to utilities were evaluated in Section 3.11, *Utilities and Waste Management*, of the Certified EIR. The proposed Project site is served by the Los Angeles Department of Water and Power (LADWP). Construction activities were not expected to cause an increase in water use. Most of the scrap metal recycling site's operational water use was related to dust suppression. With the proposed increase in scrap handling capacity under the Approved Project, additional water would be required for dust suppression and other purposes. The Approved Project's increase in water demand of approximately 9,000 gallons per day was considered an insignificant impact.

The Terminal Island Treatment Plant treats wastewater from the proposed Project site. The Certified EIR determined that the Approved Project's increase in sewage discharge would be small and not considered significant. The Los Angeles County Flood Control District operates and maintains the major storm drainage systems in the area around the proposed Project site. The Port of Los Angeles constructs and maintains its own systems. The Approved Project's storm drainage systems would result in an overall improvement in storm drainage; therefore, the Certified EIR determined that the Approved Project impacts on storm drainage would be insignificant.

Solid waste generated during the operation of the site was found to not significantly change from the existing operation at the time. The metal recycling residue from the scrap metal processing use on site, disposed in landfill as nonhazardous waste, would increase from 17,000 tons to approximately 25,000 tons per year. Soil remediation on site generated off-site disposal of up to 80,000 tons of contaminated soil. Landfilling of this soil was not expected to significantly decrease the life of landfills permitted for this material. Operation of the Approved Project had an overall positive benefit for landfill operations and capacity by diverting and recycling large volumes of metals that would otherwise go to landfills. No significant adverse impacts related to solid waste were expected from the Approved Project.

The Approved Project would not require any additional telephone or radio communication services. No impacts on services to other users were expected.

Electric power and natural gas were evaluated in Chapter 3.10, *Energy*, of the Certified EIR. The Approved Project site received electricity from LADWP and natural gas from the Southern California Gas Company (SCG). The Approved Project's increased throughput and installation of new equipment would increase the electrical demand. This increase would be very small compared to LADWP's total power system demand and would not result in a shortfall in electricity-generating capacity. The Approved Project was found to not result in a significant impact to electrical utilities. The Approved Project was further found to require negligible amounts of natural gas beyond its demand at the time. The increase in natural gas use would not have any significant impact on SCG's supply or capacity.

The Certified EIR determined that the Approved Project would not result in any significant adverse impacts to utilities and waste management and energy. No mitigation measures were required.

With regard to cumulative impacts, the Certified EIR determined that the Approved Project would not be considered significant and was not expected to exceed the capacity of utility systems. The related projects and the Approved Project would create additional demand on electricity and natural gas; however, impacts would not be significant because the increase in demand would not exceed the supply or capacity.

4.19.2 Impacts Associated with the Proposed Project

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

Discussion

Would the project:

a. *Require or result in the relocation or construction of new or expanded water, wastewater treatment, stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?*

Less-than-Significant Impact. The proposed Project would not include any new construction or expansion beyond the Approved Project. Therefore, the proposed Project would not generate a new demand for water, wastewater, stormwater drainage, electricity, natural gas, or telecommunications. The proposed Project would not require or result in the relocation or construction of new or expanded utilities. Therefore, impacts would be

less than significant, and no significant new impact or substantial increase in the severity of a previously described impact would occur. This issue will not be addressed further in the SEIR.

b. *Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?*

Less-than-Significant Impact. The Certified EIR determined that the Approved Project would result in a less than significant impact to water supplies. The proposed Project would not generate a new demand for water. Therefore, impacts would be less than significant, and no significant new impact or substantial increase in the severity of a previously described impact would occur. This issue will not be addressed further in the SEIR.

c. *Result in a determination by the wastewater treatment provider that serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments.*

Less-than-Significant Impact. The Certified EIR determined that the Approved Project would result in a less than significant impact to wastewater generation and processing. The proposed Project would not increase wastewater production because it does not propose any new construction of expansion of the Approved Project. Consistent with the Certified EIR, a less than significant impact would occur. Therefore, impacts would be less than significant, and no significant new impact or substantial increase in the severity of a previously described impact would occur. This issue will not be addressed further in the SEIR.

d. *Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?*

Less-than-Significant Impact. The proposed Project would not include any new construction or expansion of processing capacity beyond the Approved Project. Therefore, the proposed Project would not generate an increase in solid waste or impair the attainment of solid waste reduction goals. The proposed Project would continue to comply with all applicable codes pertaining to solid waste disposal. In addition, operation of the proposed Project would comply with the City of Los Angeles's Green New Deal Sustainable City Plan (City of Los Angeles 2019), which includes a target to reduce municipal solid waste by 15 percent by 2030 and phase out single-use plastics (plastic straws, plastic utensils, plastic take-out containers, and polystyrene) by 2028. Therefore, impacts would be less than significant, and no significant new impact or substantial increase in the severity of a previously described impact would occur. This issue will not be addressed further in the SEIR.

a. *Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?*

No Impact. As described under Threshold (d) above, the proposed Project will not

generate solid waste beyond what was analyzed in the Certified EIR since it does not propose new construction nor expansion of the scrap metal recycling site. The Approved Project and proposed Project include the operation of a scrap metal recycling site, which supports local, state, and federal recycling efforts and complies with all applicable local, state, and federal solid waste regulations, including AB 939, the California Solid Waste Management Act, and AB 341, which establish waste stream diversion and recycling goals. Therefore, impacts would be less than significant, and no significant new impact or substantial increase in the severity of a previously described impact would occur. This issue will not be addressed further in the SEIR.

4.20 Wildfire

4.20.1 Summary of Impacts Identified in the 1996 Certified EIR

The Certified EIR did not evaluate wildfire impacts.

4.20.2 Impacts Associated with the Proposed Project

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

Discussion

If located in or near state responsibility areas or lands classified as Very High Fire Hazard Severity Zones, would the project:

a. Substantially impair an adopted emergency response plan or emergency evacuation plan?

No Impact. The proposed Project site is not within a State Responsibility Area (SRA) nor a designated Very High Fire Hazard Severity Zone according to the California Department of Forestry and Fire Protection (2011, 2020). The closest Very High Fire Hazard Severity Zone is in Rancho Palos Verdes, approximately 4 miles west of the proposed Project site. The proposed Project site is in a developed industrial area on Terminal Island in the Port of Los Angeles and would not have a substantial risk of wildland fires. The proposed Project also does not include any new construction nor expansion of existing uses on site. As such, no impact would occur, and no significant new impact or substantial increase in the severity of a previously described impact would result from the proposed Project. This issue will not be addressed further in the SEIR.

b. *Due to slope, prevailing winds, and other factors, exacerbate wildfire risks of, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?*

No Impact. The proposed Project site is in an industrial area on Terminal Island in the Port of Los Angeles and is not in or near a fire hazard severity zone. The proposed Project site is within a fully developed portion of the Port, and no wildland areas occur within or adjacent to the proposed Project site. The closest Very High Fire Hazard Severity Zone is in Rancho Palos Verdes, approximately 4 miles west of the proposed Project site. The proposed Project would not exacerbate wildfire risk. Therefore, no impact would occur, and no significant new impact or substantial increase in the severity of a previously described impact would occur. This issue will not be addressed further in the SEIR.

c. *Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts on the environment?*

No Impact. As mentioned above, the proposed Project site is not in or near an SRA or Very High Fire Hazard Severity Zone (CAL FIRE 2011, 2020). The proposed Project site would be in an already developed area of Terminal Island in the Port of Los Angeles. The proposed Project does not include any new construction and would not require the installation or maintenance of additional infrastructure such as roads, fuel breaks, emergency water sources, power lines, or other utilities that would exacerbate fire risk or result in temporary or ongoing impacts on the environment. Therefore, no impact would occur, and no significant new impact or substantial increase in the severity of a previously described impact would result from the proposed Project. This issue will not be addressed further in the SEIR.

d. *Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?*

No Impact. The proposed Project would not expose people or structures to significant risks as a result of runoff, post-fire slope instability, or drainage changes due to wildfires. As discussed in the analyses above, the proposed Project site is flat and developed and has no significant natural or graded slopes. It is not within a California Geological Survey–designated landslide zone or a Very High Fire Hazard Severity Zone. Additionally, the proposed Project would not change drainage patterns that would increase flood risks. Therefore, no impact would occur, and no significant new impact or substantial increase in the severity of a previously described impact would result from the proposed Project. This issue will not be addressed further in the SEIR.

4.21 Mandatory Findings of Significance

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

Discussion

a. *Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?*

No Impact. As discussed in Section 4.4, Biological Resources, the proposed Project does not have the potential to result in significant impacts to any rare or endangered plant or animal species and will not reduce the habitat for any fish or wildlife species. Also as discussed in Section 4.5, Cultural Resources, the proposed Project does not have the potential to eliminate any important examples of the major periods of California history or prehistory. Therefore, this issue will not be evaluated further in the SEIR.

b. *Does the project have impacts that are individually limited but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)*

Potentially Significant Impact. The proposed Project, in conjunction with other related projects, has the potential to result in significant cumulative impacts related to air quality, GHG emissions, hazardous materials and hydrology and water quality. Therefore, this issue will be evaluated in the SEIR.

c. *Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?*

Potentially Significant Impact. The proposed Project could result in adverse impacts on human beings, either directly or indirectly, related to air quality, GHG emissions, hazardous materials and hydrology and water quality. Therefore, this issue will be evaluated in the SEIR.

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Comment Letter #1

From: Michael Shilstone
To: Ceqacomments
Subject: CCA Letter re SA Recycling's Lease Extension
Date: Tuesday, April 4, 2023 12:41:01 PM
Attachments: image001.png
image002.png
image003.png
image004.png
image005.png
2023.04.04 LA Harbor Dept - CCA Letter re SA Recycling.pdf

Mr. Cannon,

Please find attached a letter from our organization expressing our support for SA Recycling's 10-year lease extension request at the Port of Los Angeles.

Thank you for your consideration,
Michael

CCA
CENTRAL CITY ASSOCIATION OF LOS ANGELES

Michael Shilstone
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626 Wilshire Blvd., Suite 850, Los Angeles, CA 90017
CCA Reflects | *DTLA Insights*

CCA
CENTRAL CITY ASSOCIATION OF LOS ANGELES

April 4, 2023

Chris Cannon
Director of Environmental Management
City of Los Angeles Harbor Department
425 S. Palos Verde Street
San Pedro, CA 90733

RE: Notice of Preparation for a Supplemental EIR for SA Recycling's Lease Extension

Dear Mr. Cannon,

CCA represents over 300 members who share a mission to enhance Downtown Los Angeles' vibrancy and increase opportunity in the region. We are writing in support of SA Recycling's 10-year lease extension request at the Port of Los Angeles.

This facility has been recycling scrap metal from the Los Angeles region since 1962. SA Recycling has been a valuable port tenant operating this state-of-the-art facility and an integral part of the Port community since 2007. SA Recycling is an established, reliable partner and good neighbor that supports many local community projects.

The recycled materials shipped by SA ranks as the #2 export from the Port of Los Angeles and provides a significant contribution to the port and state's global trade. The metal recycling industry is vital to the Los Angeles community by taking care of the thousands of old vehicles, appliances and household and industrial items that come to their end of life every year. California's metal-recycling industry also generates billions of dollars in economic activity annually and creates much needed tax revenue for the area. Metal-recycling also creates thousands of direct and indirect jobs in this community affording many families with a good income.

For these reasons, we support SA Recycling's request for a 10-year lease extension.

Sincerely,

Nella McOsker
President & CEO
Central City Association

CC: Gene Seroka
Executive Director, Port of Los Angeles

Jamie L. Lee, President
Board of Harbor Commissioners (BOHC)

626 Wilshire Blvd., Suite 850, Los Angeles, CA 90017
213.624.1213 | **ccala.org**

Comment Letter #2

STATE OF CALIFORNIA — Gavin Newsom, Governor

NATIVE AMERICAN HERITAGE COMMISSION

CITY OF LOS ANGELES
emailed BT
APR 10 2023
ENV MGMT DIV
HARBOR DEPARTMENT

CHAIRPERSON
Laura Miranda
Luiseño

VICE CHAIRPERSON
Reginald Pagaling
Chumash

SECRETARY
Sara Dutschke
Miwok

COMMISSIONER
Isaac Bojorquez
Ohlone-Costanoan

COMMISSIONER
Buffy McQuillen
Yokayo Pomo, Yuki, Nomlaki

COMMISSIONER
Wayne Nelson
Luiseño

COMMISSIONER
Stanley Rodriguez
Kumeyaay

COMMISSIONER
[Vacant]

COMMISSIONER
[Vacant]

EXECUTIVE SECRETARY
Raymond C. Hitchcock
Miwok/Nisenan

NAHC HEADQUARTERS
1550 Harbor Boulevard
Suite 100
West Sacramento,
California 95691
(916) 373-3710
nahc@nahc.ca.gov
NAHC.ca.gov

April 3, 2023

Nicole Enciso
Los Angeles Harbor Department – Environmental Management Division
425 S Palos Verdes St.
San Pedro, CA 90731

Re: 1993071074, SA Recycling Amendment to Permit No. 750 Project, Los Angeles County

Dear Ms. Enciso:

The Native American Heritage Commission (NAHC) has received the Notice of Preparation (NOP), Draft Environmental Impact Report (DEIR) or Early Consultation for the project referenced above. The California Environmental Quality Act (CEQA) (Pub. Resources Code §21000 et seq.), specifically Public Resources Code §21084.1, states that a project that may cause a substantial adverse change in the significance of a historical resource, is a project that may have a significant effect on the environment. (Pub. Resources Code § 21084.1; Cal. Code Regs., tit.14, §15064.5 (b) (CEQA Guidelines §15064.5 (b)). If there is substantial evidence, in light of the whole record before a lead agency, that a project may have a significant effect on the environment, an Environmental Impact Report (EIR) shall be prepared. (Pub. Resources Code §21080 (d); Cal. Code Regs., tit. 14, § 5064 subd.(a)(1) (CEQA Guidelines §15064 (a)(1)). In order to determine whether a project will cause a substantial adverse change in the significance of a historical resource, a lead agency will need to determine whether there are historical resources within the area of potential effect (APE).

CEQA was amended significantly in 2014. Assembly Bill 52 (Gatto, Chapter 532, Statutes of 2014) (AB 52) amended CEQA to create a separate category of cultural resources, "tribal cultural resources" (Pub. Resources Code §21074) and provides that a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment. (Pub. Resources Code §21084.2). Public agencies shall, when feasible, avoid damaging effects to any tribal cultural resource. (Pub. Resources Code §21084.3 (a)). **AB 52 applies to any project for which a notice of preparation, a notice of negative declaration, or a mitigated negative declaration is filed on or after July 1, 2015.** If your project involves the adoption of or amendment to a general plan or a specific plan, or the designation or proposed designation of open space, on or after March 1, 2005, it may also be subject to Senate Bill 18 (Burton, Chapter 905, Statutes of 2004) (SB 18). **Both SB 18 and AB 52 have tribal consultation requirements.** If your project is also subject to the federal National Environmental Policy Act (42 U.S.C. § 4321 et seq.) (NEPA), the tribal consultation requirements of Section 106 of the National Historic Preservation Act of 1966 (154 U.S.C. 300101, 36 C.F.R. §800 et seq.) may also apply.

The NAHC recommends consultation with California Native American tribes that are traditionally and culturally affiliated with the geographic area of your proposed project as early as possible in order to avoid inadvertent discoveries of Native American human remains and best protect tribal cultural resources. Below is a brief summary of portions of AB 52 and SB 18 as well as the NAHC's recommendations for conducting cultural resources assessments.

Consult your legal counsel about compliance with AB 52 and SB 18 as well as compliance with any other applicable laws.

AB 52

AB 52 has added to CEQA the additional requirements listed below, along with many other requirements:

1. Fourteen Day Period to Provide Notice of Completion of an Application/Decision to Undertake a Project: Within fourteen (14) days of determining that an application for a project is complete or of a decision by a public agency to undertake a project, a lead agency shall provide formal notification to a designated contact of, or tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, to be accomplished by at least one written notice that includes:

- **a.** A brief description of the project.
- **b.** The lead agency contact information.
- **c.** Notification that the California Native American tribe has 30 days to request consultation. (Pub. Resources Code §21080.3.1 (d)).
- **d.** A "California Native American tribe" is defined as a Native American tribe located in California that is on the contact list maintained by the NAHC for the purposes of Chapter 905 of Statutes of 2004 (SB 18). (Pub. Resources Code §21073).

2. Begin Consultation Within 30 Days of Receiving a Tribe's Request for Consultation and Before Releasing a Negative Declaration, Mitigated Negative Declaration, or Environmental Impact Report: A lead agency shall begin the consultation process within 30 days of receiving a request for consultation from a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project. (Pub. Resources Code §21080.3.1, subds. (d) and (e)) and prior to the release of a negative declaration, mitigated negative declaration or Environmental Impact Report. (Pub. Resources Code §21080.3.1(b)).

- **a.** For purposes of AB 52, "consultation shall have the same meaning as provided in Gov. Code §65352.4 (SB 18). (Pub. Resources Code §21080.3.1 (b)).

3. Mandatory Topics of Consultation If Requested by a Tribe: The following topics of consultation, if a tribe requests to discuss them, are mandatory topics of consultation:

- **a.** Alternatives to the project.
- **b.** Recommended mitigation measures.
- **c.** Significant effects. (Pub. Resources Code §21080.3.2 (a)).

4. Discretionary Topics of Consultation: The following topics are discretionary topics of consultation:

- **a.** Type of environmental review necessary.
- **b.** Significance of the tribal cultural resources.
- **c.** Significance of the project's impacts on tribal cultural resources.
- **d.** If necessary, project alternatives or appropriate measures for preservation or mitigation that the tribe may recommend to the lead agency. (Pub. Resources Code §21080.3.2 (a)).

5. Confidentiality of Information Submitted by a Tribe During the Environmental Review Process: With some exceptions, any information, including but not limited to, the location, description, and use of tribal cultural resources submitted by a California Native American tribe during the environmental review process shall not be included in the environmental document or otherwise disclosed by the lead agency or any other public agency to the public, consistent with Government Code §6254 (r) and §6254.10. Any information submitted by a California Native American tribe during the consultation or environmental review process shall be published in a confidential appendix to the environmental document unless the tribe that provided the information consents, in writing, to the disclosure of some or all of the information to the public. (Pub. Resources Code §21082.3 (c)(1)).

6. Discussion of Impacts to Tribal Cultural Resources in the Environmental Document: If a project may have a significant impact on a tribal cultural resource, the lead agency's environmental document shall discuss both of the following:

- **a.** Whether the proposed project has a significant impact on an identified tribal cultural resource.
- **b.** Whether feasible alternatives or mitigation measures, including those measures that may be agreed to pursuant to Public Resources Code §21082.3, subdivision (a), avoid or substantially lessen the impact on the identified tribal cultural resource. (Pub. Resources Code §21082.3 (b)).

7. Conclusion of Consultation: Consultation with a tribe shall be considered concluded when either of the following occurs:

a. The parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists, on a tribal cultural resource; or

b. A party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached. (Pub. Resources Code §21080.3.2 (b)).

8. Recommending Mitigation Measures Agreed Upon in Consultation in the Environmental Document: Any mitigation measures agreed upon in the consultation conducted pursuant to Public Resources Code §21080.3.2 shall be recommended for inclusion in the environmental document and in an adopted mitigation monitoring and reporting program, if determined to avoid or lessen the impact pursuant to Public Resources Code §21082.3, subdivision (b), paragraph 2, and shall be fully enforceable. (Pub. Resources Code §21082.3 (a)).

9. Required Consideration of Feasible Mitigation: If mitigation measures recommended by the staff of the lead agency as a result of the consultation process are not included in the environmental document or if there are no agreed upon mitigation measures at the conclusion of consultation, or if consultation does not occur, and if substantial evidence demonstrates that a project will cause a significant effect to a tribal cultural resource, the lead agency shall consider feasible mitigation pursuant to Public Resources Code §21084.3 (b). (Pub. Resources Code §21082.3 (e)).

10. Examples of Mitigation Measures That, If Feasible, May Be Considered to Avoid or Minimize Significant Adverse Impacts to Tribal Cultural Resources:

a. Avoidance and preservation of the resources in place, including, but not limited to:

i. Planning and construction to avoid the resources and protect the cultural and natural context.

ii. Planning greenspace, parks, or other open space, to incorporate the resources with culturally appropriate protection and management criteria.

b. Treating the resource with culturally appropriate dignity, taking into account the tribal cultural values and meaning of the resource, including, but not limited to, the following:

i. Protecting the cultural character and integrity of the resource.

ii. Protecting the traditional use of the resource.

iii. Protecting the confidentiality of the resource.

c. Permanent conservation easements or other interests in real property, with culturally appropriate management criteria for the purposes of preserving or utilizing the resources or places.

d. Protecting the resource. (Pub. Resource Code §21084.3 (b)).

e. Please note that a federally recognized California Native American tribe or a non-federally recognized California Native American tribe that is on the contact list maintained by the NAHC to protect a California prehistoric, archaeological, cultural, spiritual, or ceremonial place may acquire and hold conservation easements if the conservation easement is voluntarily conveyed. (Civ. Code §815.3 (c)).

f. Please note that it is the policy of the state that Native American remains and associated grave artifacts shall be repatriated. (Pub. Resources Code §5097.991).

11. Prerequisites for Certifying an Environmental Impact Report or Adopting a Mitigated Negative Declaration or Negative Declaration with a Significant Impact on an Identified Tribal Cultural Resource: An Environmental Impact Report may not be certified, nor may a mitigated negative declaration or a negative declaration be adopted unless one of the following occurs:

a. The consultation process between the tribes and the lead agency has occurred as provided in Public Resources Code §21080.3.1 and §21080.3.2 and concluded pursuant to Public Resources Code §21080.3.2.

b. The tribe that requested consultation failed to provide comments to the lead agency or otherwise failed to engage in the consultation process.

c. The lead agency provided notice of the project to the tribe in compliance with Public Resources Code §21080.3.1 (d) and the tribe failed to request consultation within 30 days. (Pub. Resources Code §21082.3 (d)).

The NAHC's PowerPoint presentation titled, "Tribal Consultation Under AB 52: Requirements and Best Practices" may be found online at: http://nahc.ca.gov/wp-content/uploads/2015/10/AB52TribalConsultation_CalEPAPDF.pdf

SB 18

SB 18 applies to local governments and requires local governments to contact, provide notice to, refer plans to, and consult with tribes prior to the adoption or amendment of a general plan or a specific plan, or the designation of open space. (Gov. Code §65352.3). Local governments should consult the Governor's Office of Planning and Research's "Tribal Consultation Guidelines," which can be found online at: https://www.opr.ca.gov/docs/09_14_05_Updated_Guidelines_922.pdf.

Some of SB 18's provisions include:

1. Tribal Consultation: If a local government considers a proposal to adopt or amend a general plan or a specific plan, or to designate open space it is required to contact the appropriate tribes identified by the NAHC by requesting a "Tribal Consultation List." If a tribe, once contacted, requests consultation the local government must consult with the tribe on the plan proposal. **A tribe has 90 days from the date of receipt of notification to request consultation unless a shorter timeframe has been agreed to by the tribe.** (Gov. Code §65352.3 (a)(2)).

2. No Statutory Time Limit on SB 18 Tribal Consultation. There is no statutory time limit on SB 18 tribal consultation.

3. Confidentiality: Consistent with the guidelines developed and adopted by the Office of Planning and Research pursuant to Gov. Code §65040.2, the city or county shall protect the confidentiality of the information concerning the specific identity, location, character, and use of places, features and objects described in Public Resources Code §5097.9 and §5097.993 that are within the city's or county's jurisdiction. (Gov. Code §65352.3 (b)).

4. Conclusion of SB 18 Tribal Consultation: Consultation should be concluded at the point in which:

- **a.** The parties to the consultation come to a mutual agreement concerning the appropriate measures for preservation or mitigation; or
- **b.** Either the local government or the tribe, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached concerning the appropriate measures of preservation or mitigation. (Tribal Consultation Guidelines, Governor's Office of Planning and Research (2005) at p. 18).

Agencies should be aware that neither AB 52 nor SB 18 precludes agencies from initiating tribal consultation with tribes that are traditionally and culturally affiliated with their jurisdictions before the timeframes provided in AB 52 and SB 18. For that reason, we urge you to continue to request Native American Tribal Contact Lists and "Sacred Lands File" searches from the NAHC. The request forms can be found online at: http://nahc.ca.gov/resources/forms/.

NAHC Recommendations for Cultural Resources Assessments

To adequately assess the existence and significance of tribal cultural resources and plan for avoidance, preservation in place, or barring both, mitigation of project-related impacts to tribal cultural resources, the NAHC recommends the following actions:

1. Contact the appropriate regional California Historical Research Information System (CHRIS) Center (https://ohp.parks.ca.gov/?page_id=30331) for an archaeological records search. The records search will determine:

- **a.** If part or all of the APE has been previously surveyed for cultural resources.
- **b.** If any known cultural resources have already been recorded on or adjacent to the APE.
- **c.** If the probability is low, moderate, or high that cultural resources are located in the APE.
- **d.** If a survey is required to determine whether previously unrecorded cultural resources are present.

2. If an archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey.

- **a.** The final report containing site forms, site significance, and mitigation measures should be submitted immediately to the planning department. All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum and not be made available for public disclosure.
- **b.** The final written report should be submitted within 3 months after work has been completed to the appropriate regional CHRIS center.

3. Contact the NAHC for:

a. A Sacred Lands File search. Remember that tribes do not always record their sacred sites in the Sacred Lands File, nor are they required to do so. A Sacred Lands File search is not a substitute for consultation with tribes that are traditionally and culturally affiliated with the geographic area of the project's APE.

b. A Native American Tribal Consultation List of appropriate tribes for consultation concerning the project site and to assist in planning for avoidance, preservation in place, or, failing both, mitigation measures.

4. Remember that the lack of surface evidence of archaeological resources (including tribal cultural resources) does not preclude their subsurface existence.

a. Lead agencies should include in their mitigation and monitoring reporting program plan provisions for the identification and evaluation of inadvertently discovered archaeological resources per Cal. Code Regs., tit. 14, §15064.5(f) (CEQA Guidelines §15064.5(f)). In areas of identified archaeological sensitivity, a certified archaeologist and a culturally affiliated Native American with knowledge of cultural resources should monitor all ground-disturbing activities.

b. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the disposition of recovered cultural items that are not burial associated in consultation with culturally affiliated Native Americans.

c. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the treatment and disposition of inadvertently discovered Native American human remains. Health and Safety Code §7050.5, Public Resources Code §5097.98, and Cal. Code Regs., tit. 14, §15064.5, subdivisions (d) and (e) (CEQA Guidelines §15064.5, subds. (d) and (e)) address the processes to be followed in the event of an inadvertent discovery of any Native American human remains and associated grave goods in a location other than a dedicated cemetery.

If you have any questions or need additional information, please contact me at my email address: Andrew.Green@nahc.ca.gov.

Sincerely,

Andrew Green

Andrew Green
Cultural Resources Analyst

cc: State Clearinghouse

Comment Letter #3

From: Enciso, Nicole
To: Ceqacomments
Subject: FW: DTSC Comment on SA Recycling Amendment to Permit No. 750 Project SCH# 1993071074
Date: Tuesday, May 2, 2023 9:58:18 AM
Attachments: SA Recycling Amendment to Permit No. 750 Project - DTSC Comments-Final (002) RD.pdf
image006.png
image007.png
image008.png
image009.png
image010.png

Regards,

Nicole Enciso
Marine Environmental Supervisor - CEQA
Office: (310) 732-3615
Mobile: (424) 342-3199
Port of Los Angeles
Environmental Management Division

***Please note that response to telephone messages may be delayed and that e-mail is the preferred mode of communication at this time.**

----------Confidentiality Notice----------
This electronic message transmission contains information from the Port of Los Angeles, which may be confidential. If you are not the intended recipient, be aware that any disclosure, copying, distribution or use of the content of this information is prohibited. If you have received this communication in error, please notify us immediately by e-mail and delete the original message and any attachment without reading or saving in any manner.

From: De Pont, Rebecca@DTSC <Rebecca.DePont@dtsc.ca.gov>
Sent: Friday, April 28, 2023 4:42 PM
To: Enciso, Nicole <NEnciso@portla.org>
Cc: OPR State Clearinghouse <State.Clearinghouse@opr.ca.gov>; Lorentzen, Wayne@DTSC <Wayne.Lorentzen@dtsc.ca.gov>; Sadwick, David@DTSC <David.Sadwick@dtsc.ca.gov>; Kereazis, Dave@DTSC <Dave.Kereazis@dtsc.ca.gov>; Purvis, Tamara@DTSC <Tamara.Purvis@dtsc.ca.gov>; Gaskins, Jordan@DTSC <Jordan.Gaskins@dtsc.ca.gov>
Subject: DTSC Comment on SA Recycling Amendment to Permit No. 750 Project SCH# 1993071074

Hello Nicole,

Please see the attached comment letter for the NOP for the Proposed SA Recycling Amendment to Permit No. 750 Project SCH# 1993071074 Project.

Let me know if you have any questions.

Best,

Rebecca De Pont
Supervising Environmental Planner
CEQA Unit-Permitting/HWMP
(916) 255-3638/ (916) 764-1093
Rebecca.DePont@dtsc.ca.gov
Department of Toxic Substances Control
California Environmental Protection Agency

Yana Garcia
Secretary for
Environmental Protection

Department of Toxic Substances Control

Meredith Williams, Ph.D.
Director
8800 Cal Center Drive
Sacramento, California 95826-3200

Gavin Newsom
Governor

SENT VIA ELECTRONIC MAIL

GOVERNOR'S OFFICE OF PLANNING AND RESEARCH
STATE OF CALIFORNIA
May 01 2023

April 28, 2023

Nicole Enciso
Marine Environmental Supervisor – CEQA
Port of Los Angeles Environmental Management Division
425 S Palos Verdes St
San Pedro, CA 90731
nenciso@portla.org

RE: Notice of Preparation (NOP) for a Draft Subsequent EIR (SA Recycling Amendment to Permit No. 750 Project SCH# 1993071074)

Dear Ms. Enciso:

The Department of Toxic Substances Control (DTSC) received a Notice of Preparation (NOP) of a Draft Subsequent Environmental Impact Report (DEIR) for the proposed SA Recycling Amendment to Permit No. 750 Project (Project). The primary objective of the Project is to amend the existing lease (Hugo Neu-Proler Permit No. 750) to allow for an additional ten years of continued operations of the SA Recycling scrap-metal recycling facility located at Berths 210 and 211 on Terminal Island without any changes in the use or scope of SA Recycling's current operation.

Regulatory Context

The Project Site is a hazardous waste facility as defined by California Code of Regulations (CCR), Title 22, Section 66260.10, and the releases of shredder residues, including off-site light fibrous materials (LFMs), with elevated levels of lead and zinc are hazardous waste as defined in CCR, Title 22, Section 66261.20. DTSC is the responsible agency for the enforcement of the cited regulations.

Recorded Presence of Hazardous Waste Constituents on Site with High Potential for Off-Site Release at SA Recycling, Terminal Island

DTSC scientists have observed and sampled patches, clumps, and accumulations of LFM on pavement, in pavement cracks, on equipment, inside utility vaults, and inside and over storm drains outside of the facility. LFM is a lightweight, highly mobile, residual material produced during the metal shredding process which can be uncontrollably dispersed offsite by wind, rain, or other factors if not responsibly managed. LFM resulting from metal shredding operations typically consists of residues such as fine metal particulates, glass, rubber, automobile fluids, dirt, and plastics. LFM comes from shredded car dashboards, car seats, other car parts, household appliances, and other sources. Samples of LFM released from the facility have been shown to meet the criteria for hazardous waste in California due to concentrations of metals at levels exceeding the toxicity criteria defined in the California Code of Regulations, Title 22, Section 66261.24(a)(2)(A).

Environmental Requirements Pertaining to SA Recycling, Terminal Island: Permit, Outstanding Violations and Corrective Action Order, and Investigation and Remediation Under DTSC Oversight Prior to Closure/Vacation

Under CCR Title 22, Section 66260.10, and CCR Title 22, Section 66261.20, the facility is subject to the following environmental requirements:

1. **Authorization:**

   It is DTSC's position that metal shredding facilities require DTSC's authorization to operate.

2. **Corrective Action: Environmental Site Assessment, Site Investigation, and Hazardous Substance Remediation:**

   DTSC has issued Summaries of Violations to the facility, including one on September 30, 2021, for disposal of a hazardous waste at a point that is not authorized and failure to minimize the release of hazardous waste or hazardous waste constituents to the air, soil, or surface water which could threaten human

health or the environment. DTSC requires corrective action for all releases from a facility. Both the facility operator and landowner (Port of LA) are liable for the corrective action. DTSC issued an Enforcement Order for Corrective Action on October 18, 2021. Based on the observed releases of hazardous waste or hazardous waste constituents from the Site, DTSC requires the facility to conduct on- and off-site investigation to develop a conceptual site model of the contamination, and remediation of any identified hazardous substances on- and off-site-based on the current cleanup standards for the Site's and adjacent site's uses to ensure the Site is protective of human health and the environment.

In response to the 2021 Enforcement Order for Corrective Action, the facility requested a hearing, and tolling agreements have extended the hearing to the present time. DTSC and the facility are engaged in ongoing negotiations that commenced in 2018 regarding outstanding violations, and compliance with the corrective action enforcement order. The parties have made significant progress in the settlement process. However, additional time is necessary to resolve remaining issues.

3. **Environmental Site Assessment, Site Investigation, and Remediation Before Closure:**

   In the event that the facility will no longer operate at the Site, DTSC requires that appropriate site investigation and remediation be completed prior to vacating the site.

Recommendations

The Port of Los Angeles, and the members of the Los Angeles Board of Harbor Commissioners, as the Project Site owner, should give significant weight to the outstanding violations, and outstanding corrective action enforcement order in their consideration of the proposed lease extension. Both owner and operator are liable for the outstanding violations and corrective action enforcement order. In addition, DTSC recommends that compliance with all applicable or relevant and appropriate requirements (environmental laws), and site investigation and hazardous substance

remediation by the facility operators prior to vacating the Project Site both be included in future lease agreement terms.

DTSC appreciates the opportunity to comment on the NOP and proposed DEIR. If you have any questions, please contact me at (916) 255-3638 or via email at Rebecca.Depont@dtsc.ca.gov.

Sincerely,

Rebecca De Pont

Rebecca De Pont
Unit Chief
CEQA Unit
Hazardous Waste Management Program
Department of Toxic Substances Control

cc: (via email)

Governor's Office of Planning and Research
State Clearinghouse
State.Clearinghouse@opr.ca.gov

Ms. Tamara Purvis
Associate Environmental Planner
CEQA Unit-Permitting/HWMP
Department of Toxic Substances Control
Tamara.Purvis@dtsc.ca.gov

Mr. Dave Kereazis
Associate Environmental Planner
CEQA Unit-Permitting/HWMP
Department of Toxic Substances Control
Dave.Kereazis@dtsc.ca.gov

Comment Letter #4

From: fennec-pulpit0e@icloud.com
To: Ceqacomments
Subject: SA Recycling Amendment to Permit No. 750 Project
Date: Thursday, March 30, 2023 1:21:52 PM

I work at the terminal right next to this facility. If the wind is coming from their direction, we have to wear masks due to the amount of dust particles and terrible smells emitted from their operations.
Longshore health

Comment Letter #5

From: tom hoffman
To: Ceqacomments
Subject: SA Recycling
Date: Sunday, April 2, 2023 10:00:15 AM

Dear staff,

I have resided in So. Calif. for 48 years and have witnessed first hand the benefits and the costs of the rabid environmental lobby in state government. I will conceded the air is far cleaner today than it was in 1975. But how much cleaned can the air get and at what cost? Entire industries have been driven out of So Cal at a cost of thousands of good paying jobs while increasing the cost of day to day living for every Californian. The radical environmentalist will not be satisfied until we all live in teepees and ride horses.

Tom Hoffman
Rancho Palos Verdes
310 265 0200

Comment Letter #6

sharefest
EMPOWERING YOUTH. TRANSFORMING COMMUNITIES.

CITY OF LOS ANGELES
emailed BT
APR 10 2023
ENV MGMT DIV
HARBOR DEPARTMENT

April 03, 2023

Chris Cannon
Director of Environmental Management
City of Los Angeles Harbor Department
425 S. Palos Verde Street, San Pedro, Ca 90733-0151
ccannon@portla.org

Subject: Notice of Preparation for a Supplemental EIR for SA Recycling's Lease Extension

Dear Mr. Cannon,

Sharefest Community Development, Inc. strongly supports SA Recycling's 10-year lease extension request at the Port of Los Angeles.

This facility has been recycling scrap metal from the Los Angeles region since 1962. SA Recycling has been a valuable port tenant operating this state-of-the-art facility and an integral part of the Port community since 2007.

The recycled materials shipped by SA ranks as the #2 export from the Port of Los Angeles and provides a significant contribution to the port and state's global trade. The metal recycling industry is vital to the Los Angeles Community by taking care of the thousands of old vehicles, appliances and household and industrial items that come to their end of life every year. Without the metal recycling industry, these items would end up in the street or in overly crowded landfills. Since this metal recycling processing and export facility is a significant part of the recycling process for the Los Angeles community, without this facility, the scrap metal generated by the Los Angeles Community would have nowhere to go.

California's metal-recycling industry also generates billions of economic activities annually and provides much needed tax revenue for the area. Metal-recycling also creates thousands of direct and indirect jobs in this community affording many families with a good income.

SA Recycling has set the bar for what it means to be a reliable corporate partner and good neighbor by contributing heavily to many of our local community projects. At a time when our state is facing a host of major public policy challenges from a serious budget shortfall to the lack of affordable housing – we must do all that we can to keep essential businesses like SA Recycling at the Port of Los Angeles.

Sharefest, proudly supports SA Recycling's request for a 10-year lease extension.

Sincerely,

Chad Mayer, Executive Director

CC: Gene Seroka
Executive Director, Port of Los Angeles
gseroka@portla.org

Jamie L. Lee, President
Board of Harbor Commissioners (BOHC)
commissioners@portla.org

Comment Letter #7

From:	Jenn Baker
To:	Ceqacomments
Cc:	David Thornburg
Subject:	SA Recycling Amendment to Permit No. 750 Project
Date:	Friday, April 7, 2023 9:23:24 AM
Attachments:	SA Biz Support Letter final draft.pdf

Hello,

On behalf of the Propeller Club of Los Angeles and Long Beach, please find our attached support letter for SA Recycling's 10-year lease extension request at the Port of Los Angeles. If you have any questions, please let me know.

Sincerely,

Jenn Baker

jenn@groupconcepts.org
PO Box 10
Manhattan Beach, CA 90267
Phone: 714.632.6800
Fax: 714.632.5405

April 6, 2023

Chris Cannon
Director of Environmental Management
City of Los Angeles Harbor Department
425 S. Palos Verde Street , San Pedro, Ca 90733-0151
ccannon@portla.org

Subject: Notice of Preparation for a Supplemental EIR for SA Recycling's Lease Extension

On behalf of the Propeller Club of Los Angeles and Long Beach representing over 100 business organizations, we strongly support SA Recycling's 10-year lease extension request at the Port of Los Angeles.

This facility has been recycling scrap metal from the Los Angeles region since 1962. SA Recycling has been a valuable port tenant operating this state-of-the-art facility and an integral part of the Port community since 2007.

The recycled materials shipped by SA ranks as the #2 export from the Port of Los Angeles and provides a significant contribution to the port and state's global trade. The metal recycling industry is vital to the Los Angeles Community by taking care of the thousands of old vehicles, appliances and household and industrial items that come to their end of life every year. Without the metal recycling industry, these items would end up in the street or in the overly crowded landfills. Since this metal recycling processing and export facility is a significant part of the recycling process for the Los Angeles community, without this facility, the scrap metal generated by the Los Angeles Community would have nowhere to go.

California's metal-recycling industry also generates billions of economic activity annually and provides much needed tax revenue for the area. Metal-recycling also creates thousands of direct and indirect jobs in this community affording many families with a good income.

SA Recycling has set the bar for what it means to be a reliable corporate partner and good neighbor by contributing heavily to many of our local community projects. At a time when our state is facing a host of major public policy challenges from a serious budget shortfall to the lack of affordable housing – we must do all that we can to keep essential businesses like SA Recycling at the Port of Los Angeles.

On behalf of our members, Propeller Club of Los Angeles and Long Beach proudly supports SA Recycling's request for a 10-year lease extension.

Sue Dvonch
Propeller Club Los Angeles and Long Beach President

CC: Gene Seroka
Executive Director, Port of Los Angeles
gseroka@portla.org

Jamie L. Lee , President
Board of Harbor Commissioners (BOHC)
commissioners@portla.org

Comment Letter #8

From: Cannon, Chris
To: Ceqacomments; Enciso, Nicole
Subject: Fwd: SA Recycling Letter of Support
Date: Monday, April 10, 2023 10:01:08 AM
Attachments: SA Recycling Letter of Support.pdf

Sent from wireless

Begin forwarded message:

From: "De La Torre, Yolanda" <YolandaDeLaTorre@ymcala.org>
Date: April 10, 2023 at 9:48:51 AM PDT
To: "Cannon, Chris" <CCannon@portla.org>
Subject: SA Recycling Letter of Support

Good morning Chris,
Please find the Wilmington YMCA's letter of support for the SA Recycling Lease Extension,

Thank you,

Yolanda (Yoli) De La Torre
Regional Vice President
WILMINGTON AND GARDENA-CARSON YMCA
1127 N Avalon Blvd, Wilmington CA 90744
(C) 310 935 9389
(E)yolandadelatorre@ymcala.org (W) ymcaLA.org

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FOR YOUTH DEVELOPMENT®
FOR HEALTHY LIVING
FOR SOCIAL RESPONSIBILITY

April 10, 2023

Chris Cannon
Director of Environmental Management
City of Los Angeles Harbor Department
425 S. Palos Verde Street , San Pedro, Ca 90733-0151
ccannon@portla.org

Subject: Notice of Preparation for a Supplemental EIR for SA Recycling's Lease Extension

On behalf of the Wilmington and Gardena-Carson YMCA's representing one business organization in two different locations, we strongly support SA Recycling's 10-year lease extension request at the Port of Los Angeles.

This facility has been recycling scrap metal from the Los Angeles region since 1962. SA Recycling has been a valuable port tenant operating this state-of-the-art facility and an integral part of the Port community since 2007.

The recycled materials shipped by SA ranks as the #2 export from the Port of Los Angeles and provides a significant contribution to the port and state's global trade. The metal recycling industry is vital to the Los Angeles Community by taking care of the thousands of old vehicles, appliances and household and industrial items that come to their end of life every year. Without the metal recycling industry, these items would end up in the street or in the overly crowded landfills. Since this metal recycling processing and export facility is a significant part of the recycling process for the Los Angeles community, without this facility, the scrap metal generated by the Los Angeles Community would have nowhere to go.

California's metal-recycling industry also generates billions of economic activity annually and provides much needed tax revenue for the area. Metal-recycling also creates thousands of direct and indirect jobs in this community affording many families with a good income.

SA Recycling has set the bar for what it means to be a reliable corporate partner and good neighbor by contributing heavily to many of our local community projects. At a time when our state is facing a host of major public policy challenges from a serious budget shortfall to the lack of affordable housing – we must do all that we can to keep essential businesses like SA Recycling at the Port of Los Angeles.

On behalf of our members, our YMCAs proudly supports SA Recycling's request for a 10-year lease extension.

Sincerely,

Yolanda DeLaTorre
Regional VP
Wilmington and Gardena-Carson YMCAs

CC: Gene Seroka
Executive Director, Port of Los Angeles
gseroka@portla.org

Jamie L. Lee , President
Board of Harbor Commissioners (BOHC)
commissioners@portla.org

WILMINGTON YMCA
1127 N Avalon Boulevard, Wilmington, CA 90744
P 310 522 2100 **F** 310 522 2109 **W** ymcala.org/wil

Comment Letter #9

From:	Amy Grat
To:	Ceqacomments
Cc:	Dan Hoffman
Subject:	Support letter SA Recycling
Date:	Thursday, April 6, 2023 9:54:37 AM
Attachments:	SA Biz Support Letter EXP.pdf

Please find attached a letter of support for SA Recycling.
Amy Grat

Amy Grat | **CHIEF EXECUTIVE OFFICER**

EXP - The opportunity engine
2417 E. Carson Street, Suite 200, Carson, CA 90810
o 424.368.7100 x 103 **c** 818.421.4843
e amygrat@expfuture.org **f** 310.518.8055
w EXPfuture.org

Facebook | LinkedIn | Instagram | Twitter | YouTube

The opportunity engine

March 31, 2023

Chris Cannon
Director of Environmental Management
City of Los Angeles Harbor Department
425 S. Palos Verde Street, San Pedro, CA 90733-0151
ccannon@portla.org

Subject: Notice of Preparation for a Supplemental EIR for SA Recycling's Lease Extension

On behalf of EXP, I strongly support SA Recycling's 10-year lease extension request at the Port of Los Angeles.

This facility has been recycling scrap metal from the Los Angeles region since 1962. SA Recycling has been a valuable port tenant operating this state-of-the-art facility and an integral part of the Port community since 2007. SA Recycling has been a supporter of ITEP/EXP since our earliest days, taking in our interns, volunteering in our programs, and sponsoring our events.

The recycled materials shipped by SA ranks as the #2 export from the Port of Los Angeles and provides a significant contribution to the port and state's global trade. The metal recycling industry is vital to the Los Angeles Community by taking care of the thousands of old vehicles, appliances and household and industrial items that come to their end of life every year. Without the metal recycling industry, these items would end up in the street or in the overly crowded landfills. Since this metal recycling processing and export facility is a significant part of the recycling process for the Los Angeles community, without this facility, the scrap metal generated by the Los Angeles Community would have nowhere to go.

California's metal-recycling industry also generates billions of economic activities annually and provides much needed tax revenue for the area. Metal-recycling also creates thousands of direct and indirect jobs in this community affording many families with a good income.

SA Recycling has set the bar for what it means to be a reliable corporate partner and good neighbor by contributing heavily to many of our local community projects. At a time when our state is facing a host of major public policy challenges from a serious budget shortfall to the lack of affordable housing – we must do all that we can to keep essential businesses like SA Recycling at the Port of Los Angeles.

EXP proudly supports SA Recycling's request for a 10-year lease extension.

Sincerely,

Amy Grat, CEO

CC: Gene Seroka
Executive Director, Port of Los Angeles
gseroka@portla.org

Jamie L. Lee, President
Board of Harbor Commissioners (BOHC)
commissioners@portla.org

Comment Letter #10

The Chamber
Long Beach Area Chamber of Commerce

April 21, 2023

Christopher Cannon, Director of Environmental Management
Los Angeles Harbor Department
425 South Palos Verdes Street San Pedro, CA 90731

Subject: SA Recycling Amendment to Permit No. 750 Project

Dear Director Cannon,

On behalf of our approximately 800 members from across the greater Long Beach area, we want to offer our SUPPORT regarding SA Recycling's 10-year lease extension request at the Port of Los Angeles.

SA Recycling is a community leader whose efforts have diverted millions of tons of scrap from landfills, resulting in cleaner air and water for our community. By supporting the use of recycled metals to make new steel, SA Recycling is championing an effort to decrease greenhouse gases by 80%.Furthermore, SA supports over fifty organizations throughout the Harbor and South Bay and not just financially, but with time and talent as well. SA is an outstanding corporate citizen and has contributed heavily to many of our local community projects.

SA's facility has been operating on its current site since 1962, and is supported by both union and non-union labor. The company;s commitment to employee relations can be distinguished by the fact that one third of its employees have been with SA for over thirty years.

The Chamber believes that SA's work not only contributes to providing a cleaner and safer environment, but also provides opportunities for local workforce development and economic growth.

Due to the contributions of SA Recycling to our local community, the Chamber supports a ten-year lease extension agreement for SA and the prompt completion of the Draft Supplemental Environmental Impact Report (DSEIR). By supporting this project, you are contributing to the pathway towards a cleaner community and achieving greenhouse gas reduction. Thank you in advance for your consideration of our comments.

1 World Trade Center, Suite 1650, Long Beach, CA 90831-1650
Phone (562) 436-1251 • Fax (562) 436-7099 • info@lbchamber.com
Catalyst for business growth • Convener of leaders and influencers • Champion for a stronger community
lbchamber.com lbchamber thelbchamber longbeachchamber

Sincerely,

Jeremy Harris
President & CEO
Long Beach Area Chamber of Commerce

CC: Gene Seroka
Executive Director, Port of Los Angeles
gseroka@portla.org

CC: Jamie L. Lee , President
Board of Harbor Commissioners (BOHC)
commissioners@portla.org

Comment Letter #11

From: Mattos, Mitchell
To: Ceqacomments
Subject: Assemblymember Gipson Letter of Support for SA recycling
Date: Friday, April 21, 2023 3:38:59 PM
Attachments: Letter of Support for SA recycling 3.30.23.pdf

Hello,

I am writing today on behalf of Assemblymember Gipsons to write in support of SA recycling and their extension of their lease. This is a joint letter by Mr. Gipson and Mr. Bradford. Thank you!

Mitchell Mattos
Legislative Assistant|Democratic Caucus Consultant
Office of Assemblymember Mike A. Gipson, 65th AD
Phone: (916) 319-2065 – Mitchell.Mattos@asm.ca.gov

STATE CAPITOL
P.O. BOX 942849
SACRAMENTO, CA 94249-0065
(916) 319-2065
FAX (916) 319-2165

E-MAIL
Assemblymember.Gipson@assembly.ca.gov

Assembly
California Legislature

MIKE A. GIPSON
DEMOCRATIC CAUCUS CHAIR
ASSEMBLYMEMBER, SIXTY-FIFTH DISTRICT

COMMITTEES
BUSINESS AND PROFESSIONS
GOVERNMENTAL ORGANIZATION
INSURANCE
TRANSPORTATION

April 18, 2023

Christopher Cannon, Director
Los Angeles Harbor Department
Environmental Management Division
425 S. Palos Verdes Street
San Pedro, CA 90731

Via Email ceqacomments@portla.org

Re: Notice of Preparation for a Supplemental EIR for SA Recycling's Lease Extension

Dear Mr. Cannon:

We have been informed that the Port of Los Angeles (POLA) has published a Notice of Preparation (NOP) for a Supplemental Environmental Impact Report (EIR) for SA Recycling's (SA) request to extend its lease at the Port for another 10 years.

This facility has been recycling scrap metal from the Los Angeles area since 1962 and SA Recycling has been operating the state-of-the-art facility at this location since 2007. It is our understanding that SA's existing long-term lease is set to expire in 2024.

We are writing in support of SA's continued tenancy at the port for the following reasons: The recycling services provided by SA are vital to all our communities and businesses throughout the Los Angeles region because they process end-of-life vehicles, appliances, and various metal products that are generated in our communities. Once processed, the scrap metal products are exported to mills from SA's port facility. The recycling metal products shipped by SA ranks as the #2 export from the Port of Los Angeles and provides a significant contribution to the port's export trade.

In addition, SA is well-known for being a valuable employer in our community. Many of the employees that work at SA have been with the company through generations. SA provides good paying jobs, and they provide career growth in the industry. The company also generates many indirect jobs, many in disadvantaged communities. These jobs are vital to our local economy, and quality of life in the Los Angeles region.

SA is also a great partner and supporter of our communities. The company serves as an example of what it means to be a reasonable corporate leader and good neighbor with their investment and

DISTRICT OFFICES: 879 W. 190TH STREET, SUITE 920 • GARDENA, CA 90248 • (310) 324-6408 • FAX (310) 324-6485
205 S. WILLOWBROOK AVENUE • COMPTON, CA 90220 • (310) 605-5557 • FAX (310) 324-6408

direct involvement in our communities. SA is not just a company – its people are our neighbors, colleagues on non-profit boards and organizations. They partner and organize community events alongside us; and they are always one of the first willing to commit to help when needed.

We proudly support SA Recycling's request for a lease extension. It is vital to the port, to the economy and to this community that SA be able to continue its operation at the Port of Los Angeles.

Should you have any questions or would like more information about this issue, please contact me or my staff, Mitchell Mattos at Mitchell.Mattos@asm.ca.gov or (916) 319-2065.

Sincerely,

MIKE A. GIPSON
Assemblymember, 65th AD

STEVEN BRADFORD
Senator, 35th SD

DISTRICT OFFICES: 879 W. 190TH STREET, SUITE 920 • GARDENA, CA 90248 • (310) 324-6408 • FAX (310) 324-6485
205 S. WILLOWBROOK AVENUE • COMPTON, CA 90220 • (310) 605-5557 • FAX (310) 324-6408

Comment Letter #12

From: Sarah Wiltfong
To: Ceqacomments
Cc: Cannon, Chris; gseroka@portla.org; Commissioners
Subject: BizFed Support: Notice of Preparation for a Supplemental EIR for SA Recycling's Lease Extension
Date: Friday, April 28, 2023 2:55:45 PM
Attachments: BizFed_SA Recycling_042823.pdf

Good Afternoon,

Please find attached BizFeds letter in support of SA Recycling's lease extension. If you have any questions, please let me know!

Have a good afternoon.

Sincerely,

Sarah Wiltfong, Director of Advocacy & Policy
(310) 213-8742 - sarah.wiltfong@bizfed.org
Los Angeles County Business Federation
Strengthening the voice of business since 2008 by uniting 235 diverse business groups mobilizing 420,000 employers with 5 million employees

April 28, 2023

Chris Cannon
Director of Environmental Management
City of Los Angeles Harbor Department
425 S. Palos Verde Street ,
San Pedro, CA 90733-0151

Via email: ceqacomments@portla.org, ccannon@portla.org

Subject: Notice of Preparation for a Supplemental EIR for SA Recycling's Lease Extension

Mr. Cannon:

We are contacting you on behalf of BizFed, the Los Angeles County Business Federation, we are an alliance of over 240 business organizations who represent 420,000 employers here in Los Angeles County. We are writing to express our strong support for SA Recycling's 10-year lease extension request at the Port of Los Angeles.

This facility has been recycling scrap metal from the Los Angeles region since 1962. SA Recycling has been a valuable port tenant operating this state-of-the-art facility and an integral part of the Port community since 2007.

The recycled materials shipped by SA ranks as the #2 export from the Port of Los Angeles and provides a significant contribution to the port and state's global trade. The metal recycling industry is vital to the Los Angeles Community by taking care of the thousands of old vehicles, appliances and household and industrial items that come to their end of life every year. Without the metal recycling industry, these items would end up in the street or in the overly crowded landfills. Since this metal recycling processing and export facility is a significant part of the recycling process for the Los Angeles community, without this facility, the scrap metal generated by the Los Angeles Community would have nowhere to go.

California's metal-recycling industry also generates billions of economic activity annually and provides much needed tax revenue for the area. Metal-recycling also creates thousands of direct and indirect jobs in this community affording many families with a good income.

SA Recycling has set the bar for what it means to be a reliable corporate partner and good neighbor by contributing heavily to many of our local community projects. At a time when our state is facing a host of major public policy challenges from a serious budget shortfall to the lack of affordable housing – we must do all that we can to keep essential businesses like SA Recycling at the Port of Los Angeles.

Thank you for your consideration of our letter. If you have any questions, please contact sarah.wiltfong@bizfed.org.

Sincerely,

John Musella	David Fleming	Tracy Hernandez	David Englin
BizFed Chair	BizFed Founding Chair	BizFed Founding CEO	BizFed President

BizFed Association Members

7-11 Franchise Owners Association for SoCal
Action Apartment Association
Alhambra Chamber
American Beverage Association
Antelope Valley Chamber formerly Lancaster Chamber of Commerce
Apartment Association of Greater Los Angeles
Apartment Association, CA Southern Cities, Inc .
Arcadia Association of Realtors
AREAA North Los Angeles SFV SCV
Armenian Trade & Labor Association
Arts District Los Angeles
Associated Builders & Contractors SoCal (ABC SoCal)
Association of Club Executives
Association of Independent Commercial Producers
AV Edge California
Azusa Chamber
Beverly Hills Bar Association
Beverly Hills Chamber
BioCom
Black Business Association
BNI4SUCCESS
Bowling Centers of SoCal
Boyle Heights Chamber of Commerce
Building Industry Association - LA/Ventura Counties
Building Industry Association of Southern California
Building Industry Association- Baldyview
Building Owners & Managers Association of Greater Los Angeles
Burbank Association of Realtors
Burbank Chamber of Commerce
Business and Industry Council for Emergency Planning and Preparedness
Business Resource Group
CABIA California Business and Industrial Alliance
Calabasas Chamber of Commerce
CalAsian Chamber
CalChamber
California Apartment Association- Los Angeles
California Asphalt Pavement Association
California Bankers Association
California Business Properties
California Business Roundtable
California Cannabis Industry Association
California Cleaners Association
California Contract Cities Association
California Fashion Association
California Gaming Association
California Grocers Association
California Hispanic Chamber
California Hotel & Lodging Association
California Independent Oil Marketers Association (CIOMA)
California Independent Petroleum Association
California Life Sciences Association
California Manufacturers & Technology Association
California Metals Coalition
California Natural Gas Producers Association
California Restaurant Association
California Retailers Association
California Self Storage Association
California Small Business Alliance
California Society of CPAs - Los Angeles Chapter
California Trucking Association+
Carson Chamber of Commerce
Carson Dominguez Employers Alliance
Central City Association
Century City Chamber of Commerce
Cerritos Regional Chamber of Commerce
Chatsworth Porter Ranch Chamber of Commerce
Citrus Valley Association of Realtors
Claremont Chamber of Commerce
Commercial Industrial Council/Chamber of Commerce
Compton Chamber of Commerce
Construction Industry Air Quality Coalition
Construction Industry Coalition on Water Quality
Council on Infil Builders
Crenshaw Chamber of Commerce
Culver City Chamber of Commerce
Downey Association of REALTORS
Downey Chamber of Commerce
Downtown Alhambra Business Association
Downtown Center Business Improvement District
Downtown Long Beach Alliance
El Monte/South El Monte Chamber
El Segundo Chamber of Commerce
Employers Group
Encino Chamber of Commerce
Energy Independence Now EIN
Engineering Contractor's Association
FastLink DTLA
Filipino American Chamber of Commerce
Friends of Hollywood Central Park
FuturePorts
Gardena Valley Chamber
Gateway to LA
Glendale Association of Realtors
Glendale Chamber
Glendora Chamber
Greater Antelope Valley AOR
Greater Bakersfield Chamber of Commerce
Greater Lakewood Chamber of Commerce
Greater Leimert Park Crenshaw Corridor BID
Greater Los Angeles African American Chamber
Greater Los Angeles Association of Realtors
Greater Los Angeles New Car Dealers Association
Greater San Fernando Valley Chamber
Harbor Association of Industry and Commerce
Harbor Trucking Association
Historic Core BID of Downtown Los Angeles
Hollywood Chamber
Hong Kong Trade Development Council
Hospital Association of Southern California
Hotel Association of Los Angeles
Huntington Park Area Chamber of Commerce
ICBWA- International Cannabis Women Business Association
Independent Cities Association
Industrial Environmental Association
Industry Business Council
Inglewood Board of Real Estate
Inland Empire Economic Partnership
International Franchise Association
Irwindale Chamber of Commerce
Kombucha Brewers International
La Cañada Flintridge Chamber
LA Coalition
LA Fashion District BID
LA South Chamber of Commerce
Larchmont Boulevard Association
Latin Business Association
Latino Food Industry Association
Latino Restaurant Association
LAX Coastal Area Chamber
League of California Cities
Long Beach Area Chamber
Long Beach Economic Partnership
Los Angeles Area Chamber
Los Angeles Economic Development Center
Los Angeles Gateway Chamber of Commerce
Los Angeles Latino Chamber
Los Angeles LGBTQ Chamber of Commerce
Los Angeles Parking Association
Los Angeles World Affairs Council/Town Hall Los Angeles
MADIA
Malibu Chamber of Commerce
Manhattan Beach Chamber of Commerce
Marketplace Industry Association
Monrovia Chamber
Motion Picture Association of America, Inc.
MoveLA
MultiCultural Business Alliance
NAIOP Southern California Chapter
NAREIT
National Association of Minority Contractors
National Association of Tobacco Outlets
National Association of Women Business Owners
National Association of Women Business Owners - LA
National Association of Women Business Owners- California
National Federation of Independent Business Owners California
National Hookah
National Latina Business Women's Association
Orange County Business Council
Orange County Hispanic Chamber of Commerce
Pacific Merchant Shipping Association
Panorama City Chamber of Commerce
Paramount Chamber of Commerce
Pasadena Chamber
Pasadena Foothills Association of Realtors
PGA
PhRMA
Pico Rivera Chamber of Commerce
Planned Parenthood Affiliates of California
Pomona Chamber
Rancho Southeast REALTORS
ReadyNation California
Recording Industry Association of America
Regional CAL Black Chamber, SVF
Regional Hispanic Chambers
San Dimas Chamber of Commerce
San Gabriel Chamber of Commerce
San Gabriel Valley Economic Partnership
San Pedro Peninsula Chamber
Santa Clarita Valley Chamber
Santa Clarita Valley Economic Development Corp.
Santa Monica Chamber of Commerce
Sherman Oaks Chamber
South Bay Association of Chambers
South Bay Association of Realtors
South Gate Chamber of Commerce
South Pasadena Chamber of Commerce
Southern California Contractors Association
Southern California Golf Association
Southern California Grantmakers
Southern California Leadership Council
Southern California Minority Suppliers Development Council Inc.
Southern California Water Coalition
Southland Regional Association of Realtors
Sportfishing Association of California
Structural Engineers Association of Southern California
Sunland/Tujunga Chamber
Sunset Strip Business Improvement District
Torrance Area Chamber
Tri-Counties Association of Realtors
United Cannabis Business Association
United Chambers – San Fernando Valley & Region
United States-Mexico Chamber
Unmanned Autonomous Vehicle Systems Association
US Green Building Council
US Resiliency Council
Valley Economic Alliance, The
Valley Industry & Commerce Association
Venice Chamber of Commerce
Vermont Slauson Economic Development Corporation
Veterans in Business
Vietnamese American Chamber
Warner Center Association
West Hollywood Chamber
West Hollywood Design District
West Los Angeles Chamber
West San Gabriel Valley Association of Realtors
West Valley/Warner Center Chamber
Western Electrical Contractors Association
Western Manufactured Housing Association
Western States Petroleum Association
Westside Council of Chambers
Whittier Chamber of Commerce
Wilmington Chamber
Women's Business Enterprise Council
World Trade Center

Comment Letter #13

From: ricardo rodas
To: Ceqacomments
Subject: SA Recycling Amendment to Permit No. 750 Project
Date: Thursday, April 27, 2023 8:59:52 PM

For SA Recycling Amendment to Permit No. 750 Project

Sr Chistopher Cannon

Mi nombre es Ricardo Alejandro Rodas, trabajo como soldador en SA Recycling, Terminal Island, Los Angeles, CA, desde Julio del 2002.

Mi deseo de colaborar en esta audiencia es para comentar que soy testigo a través de estos años, de que esta empresa ha ido mejorando tecnológicamente para beneficio del medio ambiente; mejorando sectores del Molino, mejorando el sistema de la Separadora de materiales, comprando maquinarias pesadas de con sistemas de avanzada con respecto a la reducción de emisiones de gases, ha comprado Montacargas eléctricas, etc. También ha contratado a técnicos de medio ambiente, que entre otros asuntos también están instruyendo al personal para que todos colaboremos en el mismo proyecto de medio ambiente.

Sr. Chistopher Cannon, tengo muchas más cosas para agregar, pero sería muy extenso; me he tomado el tiempo de leer algo de su biografía y he visto que usted tiene 21 años de experiencia en la industria de servicios ambientales y estoy seguro de que SA Recycling está dispuesta a oír sus comentarios si esta empresa tiene algo más que mejorar.

Espero que la resolución que se lleve a cabo sea favorable a SA Recycling, le comento que tengo 63 años y he visto a muchas empresas cerrar sus puertas y dejar a muchos empleados a la deriva, espero que este no sea el caso; soy de los que creen que a las empresas no hay que asfixiarlas, soy de los que piensa que a las empresas hay que apoyarlas para que se desarrollen y sigan siendo parte del crecimiento de la nación y más siendo una empresa de reciclaje.

Comment Letter #14

From: Archie Hoggan
To: Ceqacomments
Subject: SA Recycling Amendment to Permit No. 750 Project
Date: Thursday, April 27, 2023 11:22:38 AM
Attachments: SA Recycling Amendment to Permit No. 750 Project_Beacon House Support.pdf

---

Dear Christopher Cannon,

I hope this email finds you well.

Please find our attached letter in support of a ten year-lease extension agreement for SA Recycling and the prompt completion of the Draft Supplemental Environmental Impact Report. A hardcopy went out today by USPS as well.

Thank you for your consideration, and please let me know if you have any questions or would like to discuss further.

Warm Regards,

Archie Hoggan
Executive Director
The Beacon House Association of San Pedro
Phone: 562.661.3625
Email: ahoggan@thebeaconhouse.org

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1003 S Beacon St.
San Pedro, CA 90731
www.thebeaconhouse.org
310-514-4940

BeaconHouse
ASSOCIATION OF SAN PEDRO

April 27, 2023

Christopher Cannon
Director of Environmental Management
Los Angeles Harbor Department
425 South Palos Verdes Street, San Pedro, CA 90731

Re: SA Recycling Amendment to Permit No. 750 Project

Dear Mr. Cannon,

We write today in support of SA Recycling ("SA") being granted a lease extension regarding Amendment to Permit No. 750. We advocate for SA because of the positive impact its business has on the environment, economy, and community in the greater Los Angeles ("LA") Area.

SA has a positive ripple effect on the greater LA environment. By diverting millions of tons of scrap per year from landfills, SA provides cleaner air and water for its residents. By the very nature of its business of recycling, SA is helping reduce greenhouse gases. These environmental impacts will help produce a sustainable environment for the greater LA Area for generations to come.

From an economic perspective, SA provides employment for union and non-union employees. A third of SA's employees have been with the company for over 30 years. SA provides over 3,000 jobs with livable wages for Southern California families. Such employment equates to millions of dollars in state and local taxes, which ultimately leads to a much more robust local economy.

SA is also an example of an exemplary corporate citizen. SA is a pilar for the Southern California Community. SA supports over 50 organizations throughout the Harbor and South Bay. SA supports many non-profits, such as the Beacon House, and without SA's support local non-profits could not accomplish their mission.

SA has been supporting our organization, The Beacon House, for over a decade. Such generosity has allowed our organization to accomplish its mission of breaking the chains of addiction and alcoholism. The Beacon House is a free treatment center and relies on fundraising and corporate giving to provide free long-term treatment for individuals who otherwise could not afford treatment.

During COVID, The Beacon House encountered severe financial difficulty, and SA stepped up and provided $50,0000. This money allowed us to keep the doors open for those still stuck in the grasps of addiction. SA's contributions helps us accomplish our mission of saving lives, giving men purpose, and reuniting families.

1003 S Beacon St.
San Pedro, CA 90731
www.thebeaconhouse.org
310-514-4940

BeaconHouse
ASSOCIATION OF SAN PEDRO

I have had the privilege of getting to know Moises Figueroa and his leadership team on a personal level, and I have been very impressed with their sincere desire to be helpful and better their community. Their generosity is more than financial, as they contribute their time and skills to the organizations they support.

For the said reasons above, I respectfully request LAHD grant a ten-year lease extension agreement for SA and the prompt completion of the Draft Supplemental Environmental Impact Report.

Thank you for your time and consideration.

Archie Hoggan
Executive Director
The Beacon House Association of San Pedro
Phone: 562.661.3625
Email: ahoggan@thebeaconhouse.org

Comment Letter #15

From: Joe Gatlin
To: Ceqacomments
Subject: Community Letter Submission
Date: Friday, April 28, 2023 1:16:41 PM
Attachments: Sa Recycling letter of support Joe Gatlin to Port NAACP (1).pdf

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Thank you

April 24, 2023

Christopher Cannon, Director
Los Angeles Harbor Department
Environmental Management Division
425 S. Palos Verdes Street
San Pedro, CA 90731

Via Email ceqacomments@portla.org

Re: Notice of Preparation for Supplemental EIR for SA Recycling's Lease Extension

Dear Mr. Cannon:

We have recently noticed that the Port of Los Angeles (POLA) has published a Notice of Preparation (NOP) for a Supplemental Environmental Report (EIR) for SA Recycling's (SA) application to extend its lease at the Port for another 10 years. The San Pedro Chapter of the NAACP strongly supports the Port's action for the following reasons:

Recycling provides important environmental, economic, and societal benefits for our local community and the region. The services at SA's Terminal Island facility consist of the processing of end-of-life vehicles, appliances and all things metal which are collected from local and regional sources. By recycling over a million tons of metals every year, SA's activities significantly reduce the amount of material that otherwise would be going to our landfills or be abandoned in our streets and alleys. Instead, the processed metals are shipped overseas or domestically where they become needed components for newly manufactured products. These activities clearly add to the economic strength of the Port, the City of Los Angeles, and the region while they also contribute to the environmental stewardship and quality of life in our communities.

SA is respected for being one of the best employers in the region. However, what makes SA a truly uniquely important company is the fact that it is an employer of predominately minority individuals. SA not only provides good paying jobs, but also nurtures careers in the industry. The Company provides training for its employees to become operators of heavy machinery, welders, mechanics, and other skills and by doing so offers steady employment at good wages and upward professional mobility. Most of the over 130 employees live in the area and have families who contribute to the vitality of our local communities. Many of the employees who work directly at SA have been working at the site for 2 or 3 generations. In addition, the many indirect jobs the Company's recycling activities generate and sustain are primarily from underserved communities.

SA and its employees have also been active participants, partners, and supporters of many of our community activities and organizations. SA is not just a company –its personnel are our neighbors; our colleagues on non-profit boards and organizations; they partner and organize community events alongside our residents, and they are always one of the first to offer assistance when help is needed. In doing so SA with its investment and direct involvement in our communities, serves as an example of what it means to be a responsible company.

The San Pedro NAACP proudly supports SA Recycling's request for a lease extension and its ability to continue its operations at the Port of Los Angeles.

Should you have any questions or would like more information about this issue, please contact me at joergatlin45k@gmail.com or (310) 766-5399

Sincerely,

Joe Gatlin
Vice President of San Pedro NAACP

Comment Letter #16

From: ramiro elias
To: Ceqacomments
Subject: SA Recycling Amedment to permit No. 750 project
Date: Friday, April 28, 2023 6:42:58 PM

To Whom it may concern,

I Ramiro Elias have a family of 7, two girls in college one in Cal Poly Pomona and the our in Cal State LA. Im proud husband and father this is why I'm requesting port to honor the extension on the lease at SA Recycling. I have been employed by the company for 19 years this past Apirl 26, 2023. My father in law, his brother, and nephews all work at SA Recycling. I have seen the company improvement throughout these year's at this work place. Working on with the port's request on environmental concerns at the company. I've beening was a Heavy duty mechanic at the Mill department for 13 years plus. I was there also as a crane operator helping with assembling rto / tem unit , in closing building of mill and the down stream. Just to let you know that from the day I started working at SA Recycling to now , there's been improvements that blow my mind throughout these year's and that I have contributed my work skills to the improvements on the facility.

My concerns on the lease extension it's has a lot to do with all personals that work at the company and also there family's. The effects will be economical problem to the city and the state too. My understanding is that if the port or the SA Recycling don't come to a agreement on the lease will end next year 2024. That the port will give a option to move next door with out a mill and that means there will be no more ams/mrp department's. Alot of our jobs are at stake , how's does that effect the state and city. By paiding our fair share on taxes. That will help on our economy issue on the state and federal that's happening currently and also federal. That's beening said we may be in danger of beening layoff which we have go under unemployment. More money that could help the state, federal and city. Not only that the medical health plan we have will be lost. To be honest to you my family and I need the medical benefits that the company has for us. So please to who it may concern please grant SA Recycling 10 more years. Thank you.

Ramiro Elias

Sent from Yahoo Mail on Android

Comment Letter #17

From:	Sam Wang
To:	Ceqacomments
Subject:	South Coast AQMD Staff's Comments on Notice of Preparation of a Draft Subsequent Environmental Impact Report for the SA Recycling Amendment to Permit No. 750 Project
Date:	Friday, April 28, 2023 6:14:58 PM
Attachments:	LAC230329-01 NOP SA Recycling Amendment to Permit NO. 750 Project.pdf

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Dear Mr. Cannon,

Attached are South Coast AQMD staff's comments on Notice of Preparation of a Draft Subsequent Environmental Impact Report for the SA Recycling Amendment to Permit No. 750 Project (South Coast AQMD Control Number: LAC230329-01). Please contact me if you have any questions regarding these comments.

Regards,

Sam Wang
Program Supervisor, CEQA IGR
Planning, Rule Development & Implementation
South Coast Air Quality Management District
21865 Copley Drive, Diamond Bar, CA 91765
(909) 396-2649
swang1@aqmd.gov

South Coast
Air Quality Management District
21865 Copley Drive, Diamond Bar, CA 91765-4178
(909) 396-2000 • www.aqmd.gov

SENT VIA E-MAIL: April 28, 2023
ceqacomments@portla.org
Christopher Cannon, Director
Los Angeles Harbor Department
Environmental Management Division
425 Palos Verdes Street
San Pedro, California 90731

Notice of Preparation of a Draft Subsequent Environmental Impact Report for the SA Recycling Amendment to Permit No. 750 Project (Proposed Project)

South Coast Air Quality Management District (South Coast AQMD) staff appreciates the opportunity to comment on the above-mentioned document. Our comments are recommendations on the analysis of potential air quality impacts from the Proposed Project that should be included in the Draft Subsequent Environmental Impact Report (EIR). Please send a copy of the Draft Subsequent EIR upon its completion and public release directly to South Coast AQMD as copies of the Draft Subsequent EIR submitted to the State Clearinghouse are not forwarded. **In addition, please send all appendices and technical documents related to the air quality, health risk, and greenhouse gas analyses and electronic versions of all emission calculation spreadsheets, and air quality modeling and health risk assessment input and output files (not PDF files). Any delays in providing all supporting documentation for our review will require additional review time beyond the end of the comment period.**

Responsible Agency and South Coast AQMD Permits

South Coast AQMD is a Responsible Agency for the Proposed Project (CEQA Guidelines Section 15381) since implementation of the Proposed Project requires permits from South Coast AQMD. It is important to note that the assumptions in the air quality analysis in the Draft Subsequent EIR will be used as the basis for evaluating the permits under CEQA and imposing permit conditions and limits. In order to ensure that impacts from the permits are fully and adequately evaluated as required under CEQA Guidelines Section 15096(b), it is recommended that the Lead Agency initiate consultation with South Coast AQMD by contacting Jillian Wong, Ph.D., Assistant Deputy Executive Officer, Engineering & Permitting.

CEQA Air Quality Analysis

Staff recommends that the Lead Agency use South Coast AQMD's CEQA Air Quality Handbook and website[1] as guidance when preparing the air quality and greenhouse gas analyses. It is also recommended that the Lead Agency use the CalEEMod[2] land use emissions software, which can estimate pollutant emissions from typical land use development and is the only software model maintained by the California Air Pollution Control Officers Association.

South Coast AQMD has developed both regional and localized significance thresholds. South Coast AQMD staff recommends that the Lead Agency quantify criteria pollutant emissions and compare the emissions to South Coast AQMD's CEQA regional pollutant emissions significance thresholds[3] and

[1] South Coast AQMD's CEQA Handbook and other resources for preparing air quality analyses can be found at: http://www.aqmd.gov/home/rules-compliance/ceqa/air-quality-analysis-handbook.
[2] CalEEMod is available free of charge at: www.caleemod.com.
[3] South Coast AQMD's CEQA regional pollutant emissions significance thresholds can be found at: http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf.

localized significance thresholds (LSTs)[4] to determine the Proposed Project's air quality impacts. The localized analysis can be conducted by either using the LST screening tables or performing dispersion modeling. In addition, the health risks associated with air toxics from all emission sources in the Proposed Project should be assessed. The CEQA document should use South Coast AQMD's Risk Assessment Procedures[5] to determine the significant air toxic impacts.

The Lead Agency should identify any potential adverse air quality impacts that could occur from all phases of the Proposed Project and all air pollutant sources related to the Proposed Project. Air quality impacts from both construction (including demolition, if any) and operations should be calculated. Construction-related air quality impacts typically include, but are not limited to, emissions from the use of heavy-duty equipment from grading, earth-loading/unloading, paving, architectural coatings, off-road mobile sources (e.g., heavy-duty construction equipment) and on-road mobile sources (e.g., construction worker vehicle trips, material transport trips, and hauling trips). Operation-related air quality impacts may include, but are not limited to, emissions from stationary sources (e.g., boilers and air pollution control devices), area sources (e.g., solvents and coatings), and vehicular trips (e.g., on- and off-road tailpipe emissions and entrained dust). Air quality impacts from indirect sources, such as sources that generate or attract vehicular trips, should be included in the analysis. Furthermore, emissions from the overlapping construction and operational activities should be combined and compared to South Coast AQMD's regional air quality CEQA *operational* thresholds to determine the level of significance.

Mitigation Measures

In the event that the Proposed Project results in significant adverse air quality impacts, CEQA requires that all feasible mitigation measures that go beyond what is required by law be utilized to minimize these impacts. Any impacts resulting from mitigation measures must also be analyzed. Several resources to assist the Lead Agency with identifying potential mitigation measures for the Proposed Project include South Coast AQMD's CEQA Air Quality Handbook,[6] South Coast AQMD's Mitigation Monitoring and Reporting Plan for the 2022 Air Quality Management Plan,[7] and Southern California Association of Government's Mitigation Monitoring and Reporting Plan for the 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy.[8].

South Coast AQMD staff is available to work with the Lead Agency to ensure that air quality, greenhouse gas, and health risk impacts from the Proposed Project are accurately evaluated and mitigated where feasible. If you have any questions regarding this letter, please contact me at swang1@aqmd.gov.

Sincerely,

Sam Wang

Sam Wang
Program Supervisor, CEQA IGR
Planning, Rule Development & Implementation

SW
LAC230329-01
Control Number

[4] South Coast AQMD's guidance for performing a localized air quality analysis can be found at: http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/localized-significance-thresholds.
[5] South Coast AQMD's Risk Assessment Procedures can be found at: https://www.aqmd.gov/home/permits/risk-assessment
[6] https://www.aqmd.gov/home/rules-compliance/ceqa/air-quality-analysis-handbook
[7] South Coast AQMD's 2022 Air Quality Management Plan can be found at: http://www.aqmd.gov/home/air-quality/clean-air-plans/air-quality-mgt-plan (Chapter 4 - Control Strategy and Implementation).
[8] Southern California Association of Governments' 2020-2045 RTP/SCS can be found at: https://www.connectsocal.org/Documents/PEIR/certified/Exhibit-A_ConnectSoCal_PEIR.pdf.

Comment Letter #18

From:	Cannon, Chris
To:	Ceqacomments
Cc:	Enciso, Nicole
Subject:	Fw: Letter regarding SA Recycling Lease Extension
Date:	Monday, May 1, 2023 3:18:49 PM
Attachments:	SA Recycling Support Letter April 19, 2023.pdf

Christopher Cannon
Environmental Management Division
Port of Los Angeles
425 South Palos Verdes Street
San Pedro, CA 90731
310-732-3763 Dir
310-547-4643 Fax

From: Elise Swanson <eswanson@sanpedrochamber.com>
Sent: Monday, May 1, 2023 3:14 PM
To: Cannon, Chris <CCannon@portla.org>
Subject: Letter regarding SA Recycling Lease Extension

Hello Chris,

Attached, please find a letter in support of SA Recycling's request for a 10 year lease extension.

Sincerely,

Elise Swanson
San Pedro Chamber of Commerce
(310) 832-7272 office
(310) 590-6311 cell
sanpedrochamber.com

The San Pedro Chamber of Commerce is a non-profit 501 (c) (6) membership organization. The mission of the San Pedro Chamber of Commerce is to promote, support, and advocate the interests of the business community. Our vision is to make San Pedro a better place to live, work, and visit.

May 1, 2023

Chris Cannon
Director of Environmental Management
City of Los Angeles Harbor Department
425 S. Palos Verde Street, San Pedro, Ca 90733-0151
ccannon@portla.org

Subject: Notice of Preparation for a Supplemental EIR for SA Recycling's Lease Extension

Dear Mr. Cannon.

The San Pedro Chamber of Commerce strongly supports SA Recycling's 10-year lease extension request at the Port of Los Angeles. SA Recycling has been an important port tenant operating a state-of-the-art facility recycling. This facility has been recycling scrap metal from the Los Angeles region since 1962, employing generations of community members at the facility.

Recycled materials shipped by SA rank as the #2 export from the Port of Los Angeles and they provide a significant contribution to the port and state's global trade. The metal recycling industry is vital to the Los Angeles community by taking care of the thousands of old vehicles, appliances and household and industrial items that come to their end of life every year. Without the metal recycling industry, these items would end up in the street or in overly crowded landfills. Since this metal recycling processing and export facility is a significant part of the recycling process for the Los Angeles community, without this facility, the scrap metal generated by the Los Angeles Community would have nowhere to go.

California's metal-recycling industry also generates billions of dollars in economic activity annually and provides much needed tax revenue for the area. Metal-recycling also creates thousands of direct and indirect jobs in this community, affording many families with a good income.

SA Recycling has set the bar for what it means to be a reliable corporate partner and good neighbor by contributing heavily to many of our local community projects. At a time when our state is facing a host of major public policy challenges from a serious budget shortfall to the lack of affordable housing – we must do all that we can to keep essential businesses like SA Recycling at the Port of Los Angeles.

On behalf of our members, we proudly support SA Recycling's request for a 10-year lease extension.

Sincerely,

Elise Swanson
President/CEO
San Pedro Chamber of Commerce

CC: Gene Seroka
Executive Director, Port of Los Angeles
gseroka@portla.org

Comment Letter #19

From:	Enciso, Nicole
To:	Ceqacomments
Subject:	FW: INCOMING MAIL: LETTER - SA RECYCLING - AMENDMENT TO PERMIT NO. 750 PROJECT
Date:	Tuesday, May 2, 2023 9:39:04 AM
Attachments:	2856_001.pdf image001.png

Regards,

Nicole Enciso
Marine Environmental Supervisor - CEQA
Office: (310) 732-3615
Mobile: (424) 342-3199
Port of Los Angeles
Environmental Management Division

***Please note that response to telephone messages may be delayed and that e-mail is the preferred mode of communication at this time.**

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From: Tengan, Brianne <BTengan@portla.org>
Sent: Thursday, April 27, 2023 4:30 PM
To: Enciso, Nicole <NEnciso@portla.org>
Cc: EMDClerical <E7@portla.org>
Subject: INCOMING MAIL: LETTER - SA RECYCLING - AMENDMENT TO PERMIT NO. 750 PROJECT

Original will be in your inbox.

(Please let me know if this letter is supposed to be sent to a different staff.)

Thank you,

Brianne Tengan
Environmental Student Worker
Phone: (310) 732 4051
Email: BTengan@portla.org

THE PORT
OF LOS ANGELES

4/17/23

CITY OF LOS ANGELES
emailed ET
APR 27 2023
ENV MGMT DIV
HARBOR DEPARTMENT

Christopher Cannon, Director

City of Los Angeles Harbor Department

SA Recycling Amendment to permit No. 750 project

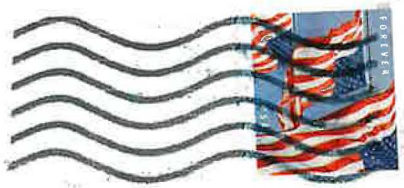
I am writing to urge you to please renew the port lease for SA Recycling At Terminal Island. I have worked at SA Recycling for 20 years. They have provided me with a good paying job that supports me and my family. I feel it is a safe place to work and is safe for the environment also. We are constantly looking for ways to improve. There are over 200 employees that count on these good paying jobs to support their families. Please give this your most thoughtful consideration.

SINCERELY,

ROBERT BARNEY
SA RECYCLING EMPLOYEE

Mr. Robert Barney
24065 Ocean Ave. Apt. 5
Torrance, CA 90505

LOS ANGELES CA 900
25 APR 2023 PM 8 L



Christopher Cannon, Director
City of Los Angeles Harbor Dept.
Environmental Management Division
425. S. Palos Verdes Street
San Pedro, CA 90731

90731-330925

Comment Letter #20

From:	Enciso, Nicole
To:	Ceqacomments
Subject:	FW: CEQA letter completed: SA Recycling Amendment To Permit No. 750 Project - NOP of dsEIR
Date:	Tuesday, May 2, 2023 9:30:50 AM
Attachments:	04252023_SA Recycling Amendment To Permit No. 750 Project - NOP of dsEIR.pdf

---

Regards,

Nicole Enciso
Marine Environmental Supervisor - CEQA
Office: (310) 732-3615
Mobile: (424) 342-3199
Port of Los Angeles
Environmental Management Division

***Please note that response to telephone messages may be delayed and that e-mail is the preferred mode of communication at this time.**

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From: Albert Lew <albert.lew@lacity.org>
Sent: Monday, May 1, 2023 2:56 PM
To: Enciso, Nicole <NEnciso@portla.org>
Cc: Than Win <than.win@lacity.org>
Subject: CEQA letter completed: SA Recycling Amendment To Permit No. 750 Project - NOP of dsEIR

Please find attached the official response. Contact us if you have any questions.

A few notes:
- Than Win is in place of Chris for receiving these notices
- a new shared email from which to receive/send responses like these is forthcoming. Will keep you posted.

Regards,

Albert C. Lew, P.E., C.S.P.
Wastewater Engineering Services Division (WESD)
Bureau of Sanitation
Department of Public Works
City of Los Angeles
Phone: 323.342.6207
Fax: 323.342.6210

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FORM GEN. 160 (Rev. 8-12)

CITY OF LOS ANGELES

INTER-DEPARTMENTAL CORRESPONDENCE

DATE: April 25, 2023

TO: Christopher Cannon, Director of Environmental Management
The Port of Los Angeles

Attn: Nicole Enciso, Marine Environmental Supervisor
The Port of Los Angeles

FROM: Rowena Lau, Division Manager
Wastewater Engineering Services Division
LA Sanitation and Environment

SUBJECT: **SA RECYCLING AMENDMENT TO PERMIT NO. 750 PROJECT - NOTICE OF PREPARATION OF A DRAFT SUBSEQUENT ENVIRONMENTAL IMPACT REPORT**

This is in response to your March 30, 2023 Notice of Preparation of a Draft Subsequent Environmental Impact Report for the proposed project located at Berths 210 and 211 on Terminal Island, San Pedro, CA 90731 . LA Sanitation, Wastewater Engineering Services Division has received and logged the notification. Upon review, it has been determined the project is unrelated to sewers and does not require any hydraulic analysis. Please notify our office in the instance that additional environmental review is necessary for this project.

If you have any questions, please call Than Win at (323) 342-6268 or email at than.win@lacity.org.

RL/TW: sa

c: Julie Allen, LASAN
Michael Scaduto, LASAN
Ryan Thiha, LASAN
Than Win, LASAN

File Location: CEQA Review\FINAL CEQA Response LTRs\FINAL DRAFT\SA Recycling Amendment To Permit No. 750 Project - NOP of dsEIR.docx

Comment Letter #21

FUTUREPORTS

PO Box 15624
Long Beach CA 90815
Office: 310.982.1323
Email: info@futureports.org
www.futureports.org

April 21, 2023

Christopher Cannon
Director of Environmental Management
City of Los Angeles Harbor Department
425 S. Palos Verde Street, San Pedro, CA 90733-0151

Subject: Notice of Preparation for a Supplemental EIR for SA Recycling's Lease Extension

Dear Mr. Cannon,

On behalf of FuturePorts, I strongly support SA Recycling's 10-year lease extension request at the Port of Los Angeles.

FuturePorts is a 501(c)(6) nonprofit advocacy coalition founded in 2005 to help coalesce the Southern California supply chain around the need to grow the ports while addressing the associated environmental, air quality, and quality of life issues. We believe that a vibrant and healthy economic and environmental future for the ports is vital to us all. FuturePorts envisions the modernization of Southern California's ports ensuring their competitiveness through the successful completion of their development programs that allow for economically viable and environmentally sustainable growth.

SA Recycling has been recycling scrap metal from the Los Angeles region since 1962 and has been a valuable port tenant operating this state-of-the-art facility since 2007. The company has become an integral part of the port community.

The recycled materials shipped by SA Recycling rank as the #5 export from the Port of Los Angeles, significantly contributing to the port and state's global trade. The metal recycling industry is crucial to the Los Angeles community, as it handles thousands of old vehicles, appliances, and household and industrial items that reach the end of their life every year. Without the metal recycling industry, these items would end up in the street or overcrowded landfills. As a major part of the recycling process for the Los Angeles community, the absence of this facility would leave the scrap metal generated by the community with nowhere to go.

California's metal-recycling industry generates billions of dollars in economic activity annually, contributing significantly to the area's tax revenue. Additionally, metal recycling creates thousands of direct and indirect jobs within the community, providing many families with a stable income.

PO Box 15624
Long Beach CA 90815
Office: 310.982.1323
Email: info@futureports.org
www.futureports.org

SA Recycling has set a high standard as a reliable corporate partner and good neighbor, contributing significantly to numerous local community projects. At a time when our state faces a host of major public policy challenges – from a serious budget shortfall to a lack of affordable housing – it is imperative we do everything we can to retain essential businesses like SA Recycling at the Port of Los Angeles.

On behalf of our members, FuturePorts proudly supports SA Recycling's request for a 10-year lease extension.

Sincerely,

Kat Janowicz
Chair of the Board
FuturePorts

CC: Gene Seroka
Executive Director, Port of Los Angeles

Jamie L. Lee, President
Board of Harbor Commissioners (BOHC)

Comment Letter #22

From: Bruce Heyman
To: Ceqacomments
Cc: Bruce Heyman
Subject: Notice of Preparation for a Supplemental EIR for SA Recycling"s Lease Extension
Date: Wednesday, May 3, 2023 7:20:27 PM
Attachments: SA Recycling Lease Extension - LAMI 23.5.3 BDH_20230503_0001.pdf

---

Hi Mr. Christopher Cannon,
Please find attached our letter submission in support of your work to Draft a Supplemental Environmental Impact Report and for consideration of a ten year lease extension for SA Recycling. We are in support of this activity. Please feel free to contact us if you have any questions.
Sincerely,
Bruce

--
Captain Bruce Heyman
Executive Director
Los Angeles Maritime Institute (LAMI)
Children's Maritime Institute (CMI)
TopSail Youth Program
Celebrating our 29th year!
Berth 73, Suite 2 | San Pedro, CA 90731
T 310.833.6055 | **C** 949.289.8400
F 310.548.2055 | **W** www.lamitopsail.org

Los Angeles Maritime Institute
Berth 73, Suite 2
San Pedro, CA 90731
310.833.6055 | LAMItopSail.org

Children's Maritime Institute
429 Shoreline Village Drive #D
Long Beach, CA 90802
310.548.2903 | AmericanPrideCMI.org

May 3, 2023

Chris Cannon
Director of Environmental Management
City of Los Angeles Harbor Department
425 S. Palos Verde Street , San Pedro, Ca 90733-0151
ccannon@portla.org

Subject: Notice of Preparation for a Supplemental EIR for SA Recycling's Lease Extension

On behalf of the Los Angeles Maritime Institute (LAMI), we strongly support the request from SA Recycling's for a 10-year lease extension at the Port of Los Angeles. We are also encouraging the rapid completion of the companion Draft Supplemental Environmental Impact Report (DSEIR).

At LAMI our mission is to encourage upper elementary, middle school, and high school students to graduate and go on to become productive members of society. Without quality middle class jobs, in our communities, these students would be forced to move elsewhere to find work. We are very thankful for companies like SA Recycling who's activities provide over 3,300 good solid jobs here in Southern California.

This facility has been recycling scrap metal from the Los Angeles region since 1962. SA Recycling has been a valuable port tenant operating this state-of-the-art facility and an integral part of the Port community since 2007. I have fond memory of the large event that SA Recycling held on their property called "Crush The Bus" where two old and highly polluting busses were crushed (removed) so that two new low SOXs, NOXs and diesel particulate emitting busses could be put into service. This impactful event was a fundraiser hosted by SA Recycling, Harbor Community Benefit Foundation and Council District 15 to benefit a local nonprofit, the Boys and Girls Club of LA Harbor.

I've had the honor of serving on the board of directors of the San Pedro Chamber of Commerce with Moises Figueroa, Regional General Manager SA Recycling, and find him and SA Recycling a real asset to our community. I've attended numerous nonprofit functions/events that were supported by SA Recycling and appreciate their commitment to the missions of on the order 50 organizations that deliver vital services to our community!

We are very pleased that a company like SA Recycling continues to operate responsibly and invest in our communities. On behalf of our volunteers, employees, board

members and myself we request that the Port of Los Angeles grant a 10-year lease extension and that we expeditiously complete the DSEIR.

Sincerely,

5/3/2023

Bruce Heyman
Executive Director
c: (949) 289-8400
e: Director@LAMITopSail.org

CC: Gene Seroka
Executive Director, Port of Los Angeles
gseroka@portla.org

Jamie L. Lee, President
Board of Harbor Commissioners (BOHC)
commissioners@portla.org

Comment Letter #23

From: angelenac@bgclublb.org
To: Cegacomments
Cc: "Dan Hoffman"
Subject: SA Recycling Support Letter
Date: Tuesday, May 2, 2023 12:10:39 PM
Attachments: SA Recycling - 4-19-23.pdf

Good afternoon!

Attached is the letter for SA Recycling support from Boys & Girls Clubs of Long Beach.

Thank you!

Angelena Carnes
Executive Assistant | **Boys & Girls Clubs of Long Beach**

3635 Long Beach Blvd., Long Beach, CA 90807
T: (562) 595-5945 **W:** www.bgclublb.org

BOYS & GIRLS CLUBS
OF LONG BEACH

Boys & Girls Clubs of Long Beach
Executive Offices:
3635 Long Beach Blvd.
Long Beach, CA 90807
(562) 595-5945
Federal ID#: 95-1643977
www.bgclublb.org

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Robert Renteria, Board Chair

* Barbie Barker
Matt Browning
* Trent Bryson
Kelly Buck
James Bunnell
Andrea Carlson
Eric Chapman
Fernando Chavez
Tony Chukuka
Carlos Delherra
Kim Estes
Damon Haber
* Brian Holmen
Albert Israel
Sandi Kayse
Perla Hernandez Lastra
Mark S. Latimer
Nathan Lee
* Daniel Munzer
Liz Munzer
Chris Nunley
Michaela Pereira
Andy Perez
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* Mitch Rouse
* Rocky Suares
* John C. Wallace^
John Zar
Jim Zupanovich

Chief Executive Officer
Don Rodriguez

* Past Board Chairs
^ In Memoriam

April 19, 2023

Chris Cannon
Director of Environmental Management
City of Los Angeles Harbor Department
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Subject: Notice of Preparation for a Supplemental EIR for SA Recycling's Lease Extension

On behalf of the Boys & Girls Clubs of Long Beach, representing 13 club locations, we strongly support SA Recycling's 10-year lease extension request at the Port of Los Angeles.

This facility has been recycling scrap metal from the Los Angeles region since 1962. SA Recycling has been a valuable port tenant operating this state-of-the-art facility and an integral part of the Port community since 2007.

The recycled materials shipped by SA ranks as the #2 export from the Port of Los Angeles and provides a significant contribution to the port and state's global trade. The metal recycling industry is vital to the Los Angeles Community by taking care of the thousands of old vehicles, appliances and household and industrial items that come to their end of life every year. Without the metal recycling industry, these items would end up in the street or in the overly crowded landfills. Since this metal recycling processing and export facility is a significant part of the recycling process for the Los Angeles community, without this facility, the scrap metal generated by the Los Angeles Community would have nowhere to go.

California's metal-recycling industry also generates billions of economic activity annually and provides much needed tax revenue for the area. Metal-recycling also creates thousands of direct and indirect jobs in this community affording many families with a good income.

SA Recycling has set the bar for what it means to be a reliable corporate partner and good neighbor by contributing heavily to many of our local community projects. At a time when our state is facing a host of major public policy challenges from a serious budget shortfall to the lack of affordable housing – we must do all that we can to keep essential businesses like SA Recycling at the Port of Los Angeles.

On behalf of our members, Boys & Girls Clubs of Long Beach proudly supports SA Recycling's request for a 10-year lease extension.

Regards,

Don Rodriguez
Chief Executive Officer
Boys & Girls Clubs of Long Beach

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Appendix B

Air Quality and GHG Calculation

Appendix B Supporting and Calculation Tables

Table A-1. Vessel Activity
Table A-2. Vehicle Activity
Table A-3. Switch Locomotive Activity at SRA
Table A-4. Operating Schedule
Table A-5. Throughput
Table A-6. Electricity Use Onsite
Table A-7. Time at Berth and Anchorage
Table A-8. Vessel Main Engine Rated Power
Table A-9. Vessel Average Aux Engine & Aux Boiler Loads
Table A-10. Vessel Maximum Rated Vessel Speed
Table A-11. Vessel Transit Speed (knots)
Table A-12. Vessel Transit Distances (nm)
Table A-13. Vessel Propulsion/Boiler Engine Emission Factors for 0.1% S MGO Fuel (g/kW-hr)
Table A-14. Vessel Auxiliary Engine Emission Factors for 0.1% MGO Fuel (g/kW-hr)
Table A-15. Vessel Low Load Adjustment Factors (LLAF) for non-MAN Engines
Table A-16. Vessel Emission Factor Adjustment (EFA) for Propulsion Engines
Table A-17. Vessel Emission Factor Adjustments for LAF and EFA (LAF*EFA) for MAN 2-Stroke Propulsion Engines without Slide Valves
Table A-18. Vessel Emission Factor Adjustments for LAF and EFA (LAF*EFA) for MAN 2-Stroke Propulsion Engines with Slide Valves
Table A-19. Vessel Load Adjustment Factors (LAF) for MAN 2-Stroke Propulsion Engines with Slide Valves
Table A-20. 2021/2022 Vessel Calls
Table A-21. Harbor Craft Data
Table A-22. HC Activity: Time required to assist vessel
Table A-23. Harbor Craft Emission Factors - EPA Standards (g/kW-hr)
Table A-24. HC Fuel Correction Factors
Table A-25. SOx Emission Factor
Table A-26. Habor Craft Load Factor
Table A-27. Peak Day Truck Emissions
Table A-28. Annual Truck Emissions
Table A-29. Truck Emissions by Emission Type
Table A-30. Truck Composite Emission Factors
Table A-31. EMFAC Output - Worker Vehicle Emission Factors
Table A-32. EMFAC Output - Truck Idling Emission Factors - PL EMFAC (IDLEX g/vh-hr)
Table A-33. Composite Truck Idling Emission Factors
Table A-34. EMFAC Output - Truck Emission Factors - Offsite Transit
Table A-35. EMFAC Output - Truck Emission Factors - Onsite Transit
Table A-36. Paved Road Dust Emission Factors
Table A-37. Worker Vehicle Emissions
Table A-38. Worker Vehicle Emission Factors
Table A-39. POLA Switch Locomotive Fleet Mix
Table A-40. POLA Switch Locomotive Emission Factors (g/hp-hr)
Table A-41. POLA Switch Locomotive Emission Factors (g/hour)
Table A-42. SAR Switch Locomotive Activity
Table A-43. Peak Day Switch Locomotive Emissions, lb/day
Table A-44. Annual Switch Locomotive Emissions, lb/year
Table A-45. Annual Switch Locomotive GHG Emissions, MT/year
Table A-46. Emissions from On-Site Sources
Table A-47. Combustion Exhaust and Fugitive Emissions from On-Site Sources Reported in the AER
Table A-48. Fuel Use from On-Site Sources Reported in the AER
Table A-49. Combustion Exhaust and Road Dust Emissions from On-Site Sources not Subject to AER Reporting
Table A-50. Fugitive Dust Emissions from On-Site Sources not Subject to AER Reporting
Table A-51. GHG Emission Exhaust Factors for Onsite Material Handling Equipment
Table A-52. Fuel Use from On-site Equipment not Subject to AER Reporting
Table A-53. Indirect GHG Emissions from Electricity Use Onsite
Table A-54. Global Warming Potentials (GWP)
Table A-55. CalEEMod Output
Table A-56. Comparison of Project to 1995 EIR, Peak Daily Operational Emissions (lb/day)

Table A-1.
Vessel Activity

Year	Vessel Type	Ship Loading Days/Year	Total Vessel Activity		EPA Engine Tier Calls				Slide Valves		Peak Day Vessel Activity			EPA Engine Tier	Slide Valves
			Vessels at Berth	Vessels at Anchorage	0	I	II	III	Yes	No	Vessels at Berth	Vessels at Anchorage	Transits	(0,I,II,II)	(Yes)
2021/2022 Baseline	Bulk	89	28	6	0	7	16	5	27	1	1	0	2	I	Yes
Proposed Project - Phase 1	Bulk	89	28	6	0	7	16	5	27	1	1	0	2	I	Yes
Proposed Project - Phase 2	Bulk	1	1	0	0	1	0	0	1	0	1	0	1	I	Yes

Source:

Annual:

Annual vessel calls and vessel type were provided by SAR's William Halligan via e-mail to POLA's Nicole Enciso on 11/12/22.

Vessel engine tiers were based on San Pedro Bay Ports Emission Inventory Methodology Report Version 4, Table 2.3. The ship build year was provided in SAR's William Halligan via e-mail to POLA's Nicole Enciso on 11/12/22

Vessel Count:		28
Vessels 2004+:		27
Vessels <1999:	Tier 0:	0
Vessels 2000-2010	Tier I:	7
Vessels 2011-2015	Tier II:	16
Vessels >2016	Tier III:	5

Vessels newer than 2004 were assumed to have slide valves per POLA Emissions Inventory Methodology Report Version 4, page 19. Vessel engine slide valves were based on the ship build year provided by SAR's William Halligan via e-mail

	With	Without
Slide valves split	96%	4%

Vessel anchorage was based on 2022 POLA Emissions Inventory, Tables 3.1 and 3.7. Calculated as ratio of bulk OGV anchorage calls to total bulk OGV calls

Table A-2.
Vehicle Activity

Year	Location	Transit Distance (mi/1-way trip)	Annual round trips	Peak Day round trips	Annual 1-way trips	Peak Day 1-way trips
2021/2022 Baseline	Trucks	30	87,746	319	175,492	638
	Delivery Trucks	10	4,680	15	9,360	30
	Container Trucks	3	1,140	4	2,280	8
	Employee Vehicles	18.5	51,100	140	102,200	280
Proposed Project - Phase 1	Trucks	30	87,746	319	175,492	638
	Delivery Trucks	10	4,680	15	9,360	30
	Container Trucks	3	1,140	4	2,280	8
	Employee Vehicles	18.5	51,100	140	102,200	280

Source:
Trucks bring material to the facility to be sorted and shipped out. Activity was provided by *SAR in SAR_ThroughputData_11_1_2022.pdf* . Truck transit distance was provided by SAR's *William Halligan via e-mail to POLA's Nicole*
Delivery trucks (FedEx, UPS) trips were provided by SAR in Port CEQA Follow-up Questions_20230126.docx. Distance was obtained from CalEEMod default. Transit distance is from CalEEMod2022, Appendix G, Table G-16 for Los Angeles County.

10.2 miles/trip

Container trucks are used to take segregated aluminum and copper material to other Port terminals.Trips provided by SAR in *Port CEQA Follow-up Questions_20230126.docx* . Distance assumed to be an average of 3 miles to POLA and POLB terminals.
Worker vehicle activity was provided by SAR in *SAR_ThroughputData_11_1_2022.pdf* . Transit distance is from CalEEMod2022, Appendix G, Table G-16 for Los Angeles County.

18.5 miles/trip

Phase 2 activity is provided in CalEEMod ouput file Table A-55.

Table A-3.
Switch Locomotive Activity at SRA

Analysis Year	Peak Day Rail Cars[1]	Annual Rail Cars[1]	Peak Day Locomotive Visits[2]	Annual Locomotive Visits [3]	Onsite Locomotive Use Per Visit (hr/visit) [4]	Total Locomotive Use Per Visit (hr/visit) [5]	Annual Locomotive Use (hr/yr)
2021/2022 Baseline	3	599	1	200	1	3	600
Proposed Project - Phase 1	3	599	1	200	1	3	600

Source:
[1] *SAR_ThroughputData_11_1_2022.pdf*
[2] Assumes that each visit would require one switch locomotive.
[3] Based on 1 locomotive per visit and annula rail cars provided by SAR.
[4] Based on past Port projects.
[5] Based on distance from nearby PHL yards.
There would be no rail car deliveries during Phase 2.

Table A-4.
Operating Schedule

312	days/year typical operating schedule for non-shipping activities
365	days/year for workers

Table A-5.
Throughput

Year	Annual Throughput	Units
2021/2022 Baseline	1,200,000	gross ton
Proposed Project - Phase 1	1,200,000	gross ton
Proposed Project - Phase 2	5,500	gross ton

Notes:

Provided by SAR.

Annual activty would not increase from baseline and would be lower than throughput proposed in the 1996 EIR.

Table A-6.
Electricity Use Onsite

Year	Annual Electricity Use (kWh)
2021/2022 Baseline	17,170,605
Proposed Project	17,170,605

Source:
Provided by SAR's William Halligan via e-mail to POLA's Nicole Enciso on 11/12/22.
Annual activty would not increase from baseline.

Table A-7.
Time at Berth and Anchorage

		Peak Day [1]				Annual Average [2]	
		On-Site Maximum	Regional Maximum				
Year	Vessel Type	Hotelling Time at Berth - Maximum On-Site (hr/call)	Transit Time (hr/1-way)	Peak Day Hotelling Time at Berth (hr/call)	Time at Anchorage (hr/day)	Hotelling Time at Berth (hr/call)	Time at Anchorage (hr/call)
2021/2022 Baseline	Bulk	24	6	18	0	76	164
Proposed Project - Phase 1	Bulk	24	6	18	0	76	164
Proposed Project - Phase 2	Bulk	18	6	18	0	18	0

Notes:

[1] Peak day:

Baseline hoteling time was based on vessel call data provided by SAR's William Halligan via e-mail to POLA's Nicole Enciso on 11/12/22.

Proposed Project - Phase 1 hoteling time would not change from baseline because Vessels size and acitivity would not change.

Proposed Project - Phase 2 reflects 1 day of shipping.

Peak on-site maximum maximizes localized emissions by accounting for 24 hours of hotelling.

Peak regional maximum maximizes transit. Vessel transit is more energy intensive than hoteling due to operation of both propulsion engines and auxiliary engines/boilers during transit. Peak day hoteling time was reduced by the transit time inside the CA over-water boundary.

Anchorage was not available and was assumed to be zero; any anchorage would be offset in the CEQA increment.

[2] Annual Average:

Baseline average hoteling time was based on vessel call data provided by SAR's William Halligan via e-mail to POLA's Nicole Enciso on 11/12/22.

Proposed Project - Phase 1 average hoteling time would not change from baseline because vessels size and acitivity would not change.

Proposed Project - Phase 2 reflects 1 day of shipping. No anchorage.

Average anchorage time was obtained from 2022 POLA Emissions Inventory, Table 3.7. Future average anchorage time would not change from baseline because Vessel size would not change.

Table A-8.
Vessel Main Engine Rated Power

		Peak Day	Annual Average
Year	**Vessel Type**	**Main Eng Avg**	**Main Eng Avg**
2021/2022 Baseline	Bulk	7,375	6,852
Proposed Project - Phase 1	Bulk	7,375	6,852
Proposed Project - Phase 2	Bulk	9,480	9,480

Notes:

Peak day and annual average engine power were based on vessel call data provided by SAR's William Halligan via e-mail to POLA's Nicole Enciso on 11/12/22.
Proposed Project - Phase 1 vessel engine power would not change from baseline because vessels size and acitivity would not change.
Proposed Project - Phase 2 load size would be much smaller than the Baseline, but activities would use a vessel comparable to the baseline. This would be a partial loading scenario, where the vessel is not exclusively dedicated to this load but would arrive partially loaded from another location.
Vessel engines were conservatively assumed to reflect the largest vessel that visited in 2021/2022.

Table A-9.

Vessel Average Aux Engine & Aux Boiler Loads

		Average Loads (kW)			
Vessel Type	**Engine Type**	**Transit**	**Maneuvering**	**Berth**	**Anchorage**
Bulk	Auxiliary Engine	222	235	544	250
Bulk	Auxiliary Boiler	63	154	184	184

Notes:

Loads were obtained from 2022 Port Emissions Inventory, Auxiliary Engines Table 3.2 and Auxiliary Boiler Table 3.5.

Auxiliary loads were assumed not to change betweeen the 2021/2022 Baseline, the Proposed Project - Phase 1, and the Proposed Project - Phase 2.

Table A-10.
Vessel Maximum Rated Vessel Speed

Category	Speed (knots)
Bulk	14.9

Notes:
2022 Port Emissions Inventory, Table 3.9.
Vessel speed was assumed not to change betweeen the 2021/2022 Baseline, the Proposed Project - Phase 1, and the Proposed Project - Phase 2.

Table A-11.
Vessel Transit Speed (knots)

Year	Vessel Type	Zone 1: Harbor	Zone 2: Breakwater to start of PZ	Zone 3: start of PZ to 20nm	Zone 4: 20nm to 40nm	Zone 5: 40 nm to 50nm SCAB Over-Water Boundary	Zone 6: 50nm to 170nm State Over-Water Boundary
All Years	Bulk	6	9	9	11	13.8	13.8

Notes:
Zone 1: Transit speed is set by Harbor Pilot (*POLA Mariners Guide 2012*).
Zone 2: Transit speed is set by Harbor Pilot (POLA Mariners Guide 2012).
Zone 3: San Pedro Bay Ports Emission Inventory Methodology Report Version 4, Table 2.1.
Zone 4: Transit speed provided by Port wharfinger data for similar projects.
Zones 5 and 6: Transit speeds calculated using the Propeller Law and 80% as the average propulsion engine load.

Table A-12.
Vessel Transit Distances (nm)

Route	Zone 1: Harbor	Zone 2: Breakwater to PZ	Zone 3: PZ to 20nm	Zone 4: 20nm to 40nm	Zone 5: 40 nm to 50nm SCAB Over-Water Boundary	Zone 6: 50nm to 170nm State Over-Water Boundary
West	3.7	8.6	20	20	7	123

Source:
Western route (vessels transiting to Asia) was assumed to be the dominant route for the project. General distance information from 2013 Port Emissions Inventory, Table 3.1.

Table A-13.
Vessel Propulsion/Boiler Engine Emission Factors for 0.1% S MGO Fuel (g/kW-hr)

Engine	IMO Tier	Model Yea	PM10	PM2.5	DPM	NOx	SOx	CO	HC	VOC	CO2	CH4	N2O
Slow Speed Diesel	0	≤1999	0.184	0.169	0.184	17.0	0.362	1.4	0.6	0.63	593	0.012	0.029
Medium Speed Diesel	0	≤1999	0.187	0.172	0.187	13.2	0.401	1.1	0.5	0.53	657	0.01	0.029
Slow Speed Diesel	I	2000-2010	0.184	0.169	0.184	16.0	0.362	1.4	0.6	0.63	593	0.012	0.029
Medium Speed Diesel	I	2000-2010	0.187	0.172	0.187	12.2	0.401	1.1	0.5	0.53	657	0.01	0.029
Slow Speed Diesel	II	2011-2015	0.184	0.169	0.184	14.4	0.362	1.4	0.6	0.63	593	0.012	0.029
Medium Speed Diesel	II	2011-2015	0.187	0.172	0.187	10.5	0.401	1.1	0.5	0.53	657	0.01	0.029
Slow Speed Diesel	III	≥2016	0.184	0.169	0.184	3.4	0.362	1.4	0.6	0.63	593	0.012	0.029
Medium Speed Diesel	III	≥2016	0.187	0.172	0.187	2.6	0.401	1.1	0.5	0.53	657	0.01	0.029
Gas Turbine	na	all	0.010	0.009	0.000	5.7	0.587	0.2	0.1	0.11	962	0.002	0.075
Steam Engine and Boiler	na	all	0.160	0.147	0.000	2.0	0.587	0.2	0.1	0.11	962	0.002	0.075

Notes:

Slow speed diesel: engine speed < 150 rpm; assumed as default for propulsion engines.

Source:

San Pedro Bay Ports Emission Inventory Methodology Report Version 4, Tables 2.3 and 2.4.

Table A-14.

Vessel Auxiliary Engine Emission Factors for 0.1% MGO Fuel (g/kW-hr)

Engine	IMO Tier	Model Year	PM10	PM2.5	DPM	NOx	SOx	CO	HC	VOC	CO2	CH4	N2O
High Speed Diesel	0	≤1999	0.189	0.174	0.189	10.9	0.424	0.9	0.4	0.42	696	0.008	0.029
Medium Speed Diesel	0	≤1999	0.189	0.174	0.189	13.8	0.424	1.1	0.4	0.42	696	0.008	0.029
High Speed Diesel	I	2000-2010	0.189	0.174	0.189	9.8	0.424	0.9	0.4	0.42	696	0.008	0.029
Medium Speed Diesel	I	2000-2010	0.189	0.174	0.189	12.2	0.424	1.1	0.4	0.42	696	0.008	0.029
High Speed Diesel	II	2011-2015	0.189	0.174	0.189	7.7	0.424	0.9	0.4	0.42	696	0.008	0.029
Medium Speed Diesel	II	2011-2015	0.189	0.174	0.189	10.5	0.424	1.1	0.4	0.42	696	0.008	0.029
High Speed Diesel	III	≥2016	0.189	0.174	0.189	2.0	0.424	0.9	0.4	0.42	696	0.008	0.029
Medium Speed Diesel	III	≥2016	0.189	0.174	0.189	2.6	0.424	1.1	0.4	0.42	696	0.008	0.029

Notes:

Auxiliary engines are medium speed.

Calculations assume that auxiliary and propulsion engines are the same model year.

Auxiliary engines are conservatively assumed to be Tier 1 for peak day future years.

Source:

San Pedro Bay Ports Emission Inventory Methodology Report Version 4, Tables 2.9 and 2.10.

Table A-15.
Vessel Low Load Adjustment Factors (LLAF) for non-MAN Engines

Load	PM10	PM2.5	DPM	NOx	SOx	CO	HC	VOC	CO2	CH4	N2O
1%	7.29	7.29	7.29	4.63	3.30	9.68	21.18	21.18	3.28	21.18	4.63
2%	7.29	7.29	7.29	4.63	3.30	9.68	21.18	21.18	3.28	21.18	4.63
3%	4.33	4.33	4.33	2.92	2.45	6.46	11.68	11.68	2.44	11.68	2.92
4%	3.09	3.09	3.09	2.21	2.02	4.86	7.71	7.71	2.01	7.71	2.21
5%	2.44	2.44	2.44	1.83	1.77	3.89	5.61	5.61	1.76	5.61	1.83
6%	2.04	2.04	2.04	1.60	1.60	3.25	4.35	4.35	1.59	4.35	1.60
7%	1.79	1.79	1.79	1.45	1.47	2.79	3.52	3.52	1.47	3.52	1.45
8%	1.61	1.61	1.61	1.35	1.38	2.45	2.95	2.95	1.38	2.95	1.35
9%	1.48	1.48	1.48	1.27	1.31	2.18	2.52	2.52	1.31	2.52	1.27
10%	1.38	1.38	1.38	1.22	1.26	1.96	2.18	2.18	1.25	2.18	1.22
11%	1.30	1.30	1.30	1.17	1.21	1.79	1.96	1.96	1.21	1.96	1.17
12%	1.24	1.24	1.24	1.14	1.17	1.64	1.76	1.76	1.17	1.76	1.14
13%	1.19	1.19	1.19	1.11	1.14	1.52	1.60	1.60	1.14	1.60	1.11
14%	1.15	1.15	1.15	1.08	1.11	1.41	1.47	1.47	1.11	1.47	1.08
15%	1.11	1.11	1.11	1.06	1.09	1.32	1.36	1.36	1.08	1.36	1.06
16%	1.08	1.08	1.08	1.05	1.06	1.24	1.26	1.26	1.06	1.26	1.05
17%	1.06	1.06	1.06	1.03	1.05	1.17	1.18	1.18	1.04	1.18	1.03
18%	1.04	1.04	1.04	1.02	1.03	1.11	1.11	1.11	1.03	1.11	1.02
19%	1.02	1.02	1.02	1.01	1.01	1.05	1.05	1.05	1.01	1.05	1.01
20%	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Table A-16.

Vessel Emission Factor Adjustment (EFA) for Propulsion Engines

	PM	PM2.5	DPM	NOx	SOx	CO	HC	VOC	CO2	CH4	N2O
Vessels without Slide Valves	1.0	1.0	1.0	1.0	1.0	0.44	1.0	1.0	1.0	1.0	1.0
Vessels with Slide Valves	1.0	1.0	1.0	1.0	1.0	0.59	0.43	0.4	1.0	1.0	1.0

Table A-17.

Vessel Emission Factor Adjustments for LAF and EFA (LAF*EFA) for MAN 2-Stroke Propulsion Engines without Slide Valves

Load	PM	PM2.5	DPM	NOx	SOx	CO	HC	VOC	CO2	CH4	N2O
1%	0.84	0.84	0.84	1.91	1.10	0.61	2.53	2.53	1.10	2.53	1.91
2%	0.83	0.83	0.83	1.86	1.10	0.60	2.45	2.45	1.10	2.45	1.86
3%	0.83	0.83	0.83	1.82	1.09	0.59	2.37	2.37	1.09	2.37	1.82
4%	0.82	0.82	0.82	1.77	1.09	0.59	2.30	2.30	1.09	2.30	1.77
5%	0.82	0.82	0.82	1.72	1.09	0.58	2.23	2.23	1.09	2.23	1.72
6%	0.81	0.81	0.81	1.68	1.08	0.57	2.16	2.16	1.08	2.16	1.68
7%	0.81	0.81	0.81	1.64	1.08	0.56	2.10	2.10	1.08	2.10	1.64
8%	0.80	0.80	0.80	1.60	1.08	0.55	2.03	2.03	1.08	2.03	1.60
9%	0.80	0.80	0.80	1.56	1.07	0.55	1.97	1.97	1.07	1.97	1.56
10%	0.79	0.79	0.79	1.52	1.07	0.55	1.91	1.91	1.07	1.91	1.52
11%	0.79	0.79	0.79	1.49	1.07	0.54	1.86	1.86	1.07	1.86	1.49
12%	0.78	0.78	0.78	1.45	1.07	0.53	1.80	1.80	1.07	1.80	1.45
13%	0.78	0.78	0.78	1.42	1.06	0.53	1.75	1.75	1.06	1.75	1.42
14%	0.78	0.78	0.78	1.39	1.06	0.52	1.70	1.70	1.06	1.70	1.39
15%	0.77	0.77	0.77	1.36	1.06	0.52	1.65	1.65	1.06	1.65	1.36
16%	0.77	0.77	0.77	1.33	1.06	0.51	1.61	1.61	1.06	1.61	1.33
17%	0.77	0.77	0.77	1.30	1.05	0.51	1.56	1.56	1.05	1.56	1.30
18%	0.77	0.77	0.77	1.28	1.05	0.51	1.52	1.52	1.05	1.52	1.28
19%	0.76	0.76	0.76	1.25	1.05	0.50	1.48	1.48	1.05	1.48	1.25
20%	0.76	0.76	0.76	1.23	1.05	0.50	1.44	1.44	1.05	1.44	1.23
21%	0.76	0.76	0.76	1.20	1.04	0.50	1.41	1.41	1.04	1.41	1.20
22%	0.76	0.76	0.76	1.18	1.04	0.49	1.37	1.37	1.04	1.37	1.18
23%	0.76	0.76	0.76	1.16	1.04	0.49	1.34	1.34	1.04	1.34	1.16
24%	0.75	0.75	0.75	1.14	1.04	0.48	1.31	1.31	1.04	1.31	1.14
25%	0.75	0.75	0.75	1.12	1.03	0.48	1.28	1.28	1.03	1.28	1.12
26%	0.75	0.75	0.75	1.11	1.03	0.48	1.25	1.25	1.03	1.25	1.11
27%	0.75	0.75	0.75	1.09	1.03	0.48	1.22	1.22	1.03	1.22	1.09
28%	0.75	0.75	0.75	1.07	1.03	0.48	1.20	1.20	1.03	1.20	1.07
29%	0.75	0.75	0.75	1.06	1.03	0.47	1.17	1.17	1.03	1.17	1.06
30%	0.75	0.75	0.75	1.05	1.02	0.47	1.15	1.15	1.02	1.15	1.05
31%	0.75	0.75	0.75	1.03	1.02	0.47	1.13	1.13	1.02	1.13	1.03
32%	0.75	0.75	0.75	1.02	1.02	0.47	1.11	1.11	1.02	1.11	1.02
33%	0.75	0.75	0.75	1.01	1.02	0.46	1.09	1.09	1.02	1.09	1.01
34%	0.75	0.75	0.75	1.00	1.02	0.46	1.08	1.08	1.02	1.08	1.00
35%	0.76	0.76	0.76	0.99	1.02	0.46	1.06	1.06	1.02	1.06	0.99
36%	0.76	0.76	0.76	0.98	1.01	0.46	1.05	1.05	1.01	1.05	0.98
37%	0.76	0.76	0.76	0.98	1.01	0.45	1.04	1.04	1.01	1.04	0.98
38%	0.76	0.76	0.76	0.97	1.01	0.45	1.02	1.02	1.01	1.02	0.97
39%	0.76	0.76	0.76	0.96	1.01	0.45	1.01	1.01	1.01	1.01	0.96
40%	0.76	0.76	0.76	0.96	1.01	0.45	1.00	1.00	1.01	1.00	0.96
41%	0.77	0.77	0.77	0.95	1.01	0.44	0.99	0.99	1.01	0.99	0.95
42%	0.77	0.77	0.77	0.95	1.01	0.44	0.99	0.99	1.01	0.99	0.95
43%	0.77	0.77	0.77	0.94	1.01	0.44	0.98	0.98	1.01	0.98	0.94
44%	0.78	0.78	0.78	0.94	1.00	0.44	0.97	0.97	1.00	0.97	0.94
45%	0.78	0.78	0.78	0.94	1.00	0.44	0.97	0.97	1.00	0.97	0.94
46%	0.78	0.78	0.78	0.94	1.00	0.44	0.96	0.96	1.00	0.96	0.94
47%	0.79	0.79	0.79	0.94	1.00	0.44	0.96	0.96	1.00	0.96	0.94
48%	0.79	0.79	0.79	0.93	1.00	0.43	0.96	0.96	1.00	0.96	0.93
49%	0.79	0.79	0.79	0.93	1.00	0.43	0.96	0.96	1.00	0.96	0.93
50%	0.80	0.80	0.80	0.93	1.00	0.43	0.96	0.96	1.00	0.96	0.93
51%	0.80	0.80	0.80	0.94	1.00	0.43	0.95	0.95	1.00	0.95	0.94
52%	0.81	0.81	0.81	0.94	1.00	0.43	0.95	0.95	1.00	0.95	0.94
53%	0.81	0.81	0.81	0.94	1.00	0.42	0.95	0.95	1.00	0.95	0.94
54%	0.82	0.82	0.82	0.94	1.00	0.42	0.95	0.95	1.00	0.95	0.94
55%	0.82	0.82	0.82	0.94	0.99	0.42	0.96	0.96	0.99	0.96	0.94
56%	0.83	0.83	0.83	0.94	0.99	0.42	0.96	0.96	0.99	0.96	0.94
57%	0.84	0.84	0.84	0.95	0.99	0.42	0.96	0.96	0.99	0.96	0.95
58%	0.84	0.84	0.84	0.95	0.99	0.42	0.96	0.96	0.99	0.96	0.95
59%	0.85	0.85	0.85	0.95	0.99	0.41	0.96	0.96	0.99	0.96	0.95
60%	0.86	0.86	0.86	0.95	0.99	0.41	0.97	0.97	0.99	0.97	0.95
61%	0.86	0.86	0.86	0.96	0.99	0.41	0.97	0.97	0.99	0.97	0.96
62%	0.87	0.87	0.87	0.96	0.99	0.41	0.97	0.97	0.99	0.97	0.96
63%	0.88	0.88	0.88	0.96	0.99	0.41	0.98	0.98	0.99	0.98	0.96
64%	0.89	0.89	0.89	0.97	0.99	0.41	0.98	0.98	0.99	0.98	0.97
65%	0.89	0.89	0.89	0.97	0.99	0.40	0.98	0.98	0.99	0.98	0.97

Vessel Load Adjustment Factors (LAF) for MAN 2-Stroke Propulsion Engines without Slide Valves

Load	PM	PM2.5	DPM	NOx	SOx	CO	HC	VOC	CO2	CH4	N2O
1%	0.84	0.84	0.84	1.91	1.10	1.38	2.53	2.53	1.10	2.53	1.91
2%	0.83	0.83	0.83	1.86	1.10	1.36	2.45	2.45	1.10	2.45	1.86
3%	0.83	0.83	0.83	1.82	1.09	1.34	2.37	2.37	1.09	2.37	1.82
4%	0.82	0.82	0.82	1.77	1.09	1.33	2.3	2.30	1.09	2.3	1.77
5%	0.82	0.82	0.82	1.72	1.09	1.31	2.23	2.23	1.09	2.23	1.72
6%	0.81	0.81	0.81	1.68	1.08	1.29	2.16	2.16	1.08	2.16	1.68
7%	0.81	0.81	0.81	1.64	1.08	1.28	2.1	2.10	1.08	2.1	1.64
8%	0.8	0.8	0.8	1.6	1.08	1.26	2.03	2.03	1.08	2.03	1.6
9%	0.8	0.8	0.8	1.56	1.07	1.25	1.97	1.97	1.07	1.97	1.56
10%	0.79	0.79	0.79	1.52	1.07	1.24	1.91	1.91	1.07	1.91	1.52
11%	0.79	0.79	0.79	1.49	1.07	1.22	1.86	1.86	1.07	1.86	1.49
12%	0.78	0.78	0.78	1.45	1.07	1.21	1.8	1.80	1.07	1.8	1.45
13%	0.78	0.78	0.78	1.42	1.06	1.2	1.75	1.75	1.06	1.75	1.42
14%	0.78	0.78	0.78	1.39	1.06	1.19	1.7	1.70	1.06	1.7	1.39
15%	0.77	0.77	0.77	1.36	1.06	1.18	1.65	1.65	1.06	1.65	1.36
16%	0.77	0.77	0.77	1.33	1.06	1.17	1.61	1.61	1.06	1.61	1.33
17%	0.77	0.77	0.77	1.3	1.05	1.16	1.56	1.56	1.05	1.56	1.3
18%	0.77	0.77	0.77	1.28	1.05	1.15	1.52	1.52	1.05	1.52	1.28
19%	0.76	0.76	0.76	1.25	1.05	1.14	1.48	1.48	1.05	1.48	1.25
20%	0.76	0.76	0.76	1.23	1.05	1.13	1.44	1.44	1.05	1.44	1.23
21%	0.76	0.76	0.76	1.2	1.04	1.13	1.41	1.41	1.04	1.41	1.2
22%	0.76	0.76	0.76	1.18	1.04	1.12	1.37	1.37	1.04	1.37	1.18
23%	0.76	0.76	0.76	1.16	1.04	1.11	1.34	1.34	1.04	1.34	1.16
24%	0.75	0.75	0.75	1.14	1.04	1.1	1.31	1.31	1.04	1.31	1.14
25%	0.75	0.75	0.75	1.12	1.03	1.1	1.28	1.28	1.03	1.28	1.12
26%	0.75	0.75	0.75	1.11	1.03	1.09	1.25	1.25	1.03	1.25	1.11
27%	0.75	0.75	0.75	1.09	1.03	1.08	1.22	1.22	1.03	1.22	1.09
28%	0.75	0.75	0.75	1.07	1.03	1.08	1.2	1.20	1.03	1.2	1.07
29%	0.75	0.75	0.75	1.06	1.03	1.07	1.17	1.17	1.03	1.17	1.06
30%	0.75	0.75	0.75	1.05	1.02	1.07	1.15	1.15	1.02	1.15	1.05
31%	0.75	0.75	0.75	1.03	1.02	1.06	1.13	1.13	1.02	1.13	1.03
32%	0.75	0.75	0.75	1.02	1.02	1.06	1.11	1.11	1.02	1.11	1.02
33%	0.75	0.75	0.75	1.01	1.02	1.05	1.09	1.09	1.02	1.09	1.01
34%	0.75	0.75	0.75	1	1.02	1.05	1.08	1.08	1.02	1.08	1
35%	0.76	0.76	0.76	0.99	1.02	1.04	1.06	1.06	1.02	1.06	0.99
36%	0.76	0.76	0.76	0.98	1.01	1.04	1.05	1.05	1.01	1.05	0.98
37%	0.76	0.76	0.76	0.98	1.01	1.03	1.04	1.04	1.01	1.04	0.98
38%	0.76	0.76	0.76	0.97	1.01	1.03	1.02	1.02	1.01	1.02	0.97
39%	0.76	0.76	0.76	0.96	1.01	1.02	1.01	1.01	1.01	1.01	0.96
40%	0.76	0.76	0.76	0.96	1.01	1.02	1	1.00	1.01	1	0.96
41%	0.77	0.77	0.77	0.95	1.01	1.01	0.99	0.99	1.01	0.99	0.95
42%	0.77	0.77	0.77	0.95	1.01	1.01	0.99	0.99	1.01	0.99	0.95
43%	0.77	0.77	0.77	0.94	1.01	1.01	0.98	0.98	1.01	0.98	0.94
44%	0.78	0.78	0.78	0.94	1	1	0.97	0.97	1	0.97	0.94
45%	0.78	0.78	0.78	0.94	1	1	0.97	0.97	1	0.97	0.94
46%	0.78	0.78	0.78	0.94	1	0.99	0.96	0.96	1	0.96	0.94
47%	0.79	0.79	0.79	0.94	1	0.99	0.96	0.96	1	0.96	0.94
48%	0.79	0.79	0.79	0.93	1	0.98	0.96	0.96	1	0.96	0.93
49%	0.79	0.79	0.79	0.93	1	0.98	0.96	0.96	1	0.96	0.93
50%	0.8	0.8	0.8	0.93	1	0.98	0.96	0.96	1	0.96	0.93
51%	0.8	0.8	0.8	0.94	1	0.97	0.95	0.95	1	0.95	0.94
52%	0.81	0.81	0.81	0.94	1	0.97	0.95	0.95	1	0.95	0.94
53%	0.81	0.81	0.81	0.94	1	0.96	0.95	0.95	1	0.95	0.94
54%	0.82	0.82	0.82	0.94	1	0.96	0.95	0.95	1	0.95	0.94
55%	0.82	0.82	0.82	0.94	0.99	0.96	0.96	0.96	0.99	0.96	0.94
56%	0.83	0.83	0.83	0.94	0.99	0.95	0.96	0.96	0.99	0.96	0.94
57%	0.84	0.84	0.84	0.95	0.99	0.95	0.96	0.96	0.99	0.96	0.95
58%	0.84	0.84	0.84	0.95	0.99	0.95	0.96	0.96	0.99	0.96	0.95
59%	0.85	0.85	0.85	0.95	0.99	0.94	0.96	0.96	0.99	0.96	0.95
60%	0.86	0.86	0.86	0.95	0.99	0.94	0.97	0.97	0.99	0.97	0.95
61%	0.86	0.86	0.86	0.96	0.99	0.93	0.97	0.97	0.99	0.97	0.96
62%	0.87	0.87	0.87	0.96	0.99	0.93	0.97	0.97	0.99	0.97	0.96
63%	0.88	0.88	0.88	0.96	0.99	0.93	0.98	0.98	0.99	0.98	0.96
64%	0.89	0.89	0.89	0.97	0.99	0.93	0.98	0.98	0.99	0.98	0.97
65%	0.89	0.89	0.89	0.97	0.99	0.92	0.98	0.98	0.99	0.98	0.97

Table A-17.

Vessel Emission Factor Adjustments for LAF and EFA (LAF*EFA) for MAN 2-Stroke Propulsion Engines without Slide Valves

Load	PM	PM2.5	DPM	NOx	SOx	CO	HC	VOC	CO2	CH4	N2O
66%	0.90	0.90	0.90	0.98	0.99	0.40	0.99	0.99	0.99	0.99	0.98
67%	0.91	0.91	0.91	0.98	0.99	0.40	0.99	0.99	0.99	0.99	0.98
68%	0.92	0.92	0.92	0.98	0.99	0.40	0.99	0.99	0.99	0.99	0.98
69%	0.93	0.93	0.93	0.99	0.99	0.40	1.00	1.00	0.99	1.00	0.99
70%	0.94	0.94	0.94	0.99	0.99	0.40	1.00	1.00	0.99	1.00	0.99
71%	0.94	0.94	0.94	0.99	0.99	0.40	1.00	1.00	0.99	1.00	0.99
72%	0.95	0.95	0.95	1.00	0.99	0.40	1.01	1.01	0.99	1.01	1.00
73%	0.96	0.96	0.96	1.00	0.99	0.40	1.01	1.01	0.99	1.01	1.00
74%	0.97	0.97	0.97	1.00	0.99	0.40	1.01	1.01	0.99	1.01	1.00
75%	0.98	0.98	0.98	1.01	0.99	0.40	1.01	1.01	0.99	1.01	1.01
76%	0.99	0.99	0.99	1.01	0.99	0.40	1.01	1.01	0.99	1.01	1.01
77%	1.00	1.00	1.00	1.01	0.99	0.40	1.01	1.01	0.99	1.01	1.01
78%	1.01	1.01	1.01	1.01	0.99	0.40	1.01	1.01	0.99	1.01	1.01
79%	1.03	1.03	1.03	1.02	0.99	0.40	1.01	1.01	1.00	1.01	1.02
80%	1.04	1.04	1.04	1.02	0.99	0.40	1.01	1.01	0.99	1.01	1.02
81%	1.05	1.05	1.05	1.02	0.99	0.40	1.01	1.01	0.99	1.01	1.02
82%	1.06	1.06	1.06	1.02	0.99	0.40	1.01	1.01	0.99	1.01	1.02
83%	1.07	1.07	1.07	1.02	0.99	0.40	1.01	1.01	0.99	1.01	1.02
84%	1.08	1.08	1.08	1.02	0.99	0.40	1.00	1.00	0.99	1.00	1.02
85%	1.10	1.10	1.10	1.02	0.99	0.40	1.00	1.00	0.99	1.00	1.02
86%	1.11	1.11	1.11	1.02	0.99	0.41	0.99	0.99	0.99	0.99	1.02
87%	1.12	1.12	1.12	1.02	0.99	0.41	0.99	0.99	0.99	0.99	1.02
88%	1.13	1.13	1.13	1.02	0.99	0.41	0.98	0.98	0.99	0.98	1.02
89%	1.15	1.15	1.15	1.01	0.99	0.42	0.97	0.97	0.99	0.97	1.01
90%	1.16	1.16	1.16	1.01	0.99	0.42	0.97	0.97	0.99	0.97	1.01
91%	1.17	1.17	1.17	1.01	1.00	0.42	0.96	0.96	1.00	0.96	1.01
92%	1.19	1.19	1.19	1.00	1.00	0.43	0.94	0.94	1.00	0.94	1.00
93%	1.20	1.20	1.20	1.00	1.00	0.43	0.93	0.93	1.00	0.93	1.00
94%	1.22	1.22	1.22	0.99	1.00	0.44	0.92	0.92	1.00	0.92	0.99
95%	1.23	1.23	1.23	0.99	1.00	0.44	0.91	0.91	1.00	0.91	0.99
96%	1.24	1.24	1.24	0.98	1.00	0.45	0.89	0.89	1.00	0.89	0.98
97%	1.26	1.26	1.26	0.97	1.00	0.45	0.87	0.87	1.00	0.87	0.97
98%	1.28	1.28	1.28	0.97	1.00	0.46	0.86	0.86	1.00	0.86	0.97
99%	1.29	1.29	1.29	0.96	1.00	0.47	0.84	0.84	1.00	0.84	0.96
100%	1.31	1.31	1.31	0.95	1.00	0.48	0.82	0.82	1.00	0.82	0.95

Notes:

These emission factor adjustments are used to adjust standard emission factors, for MAN engines without slide valves. EF = fuel corrected EF*LAF*EFA.

These emission factor adjustments are used in peak day calculations, where the type of engine has been identified or can be assumed.

Vessel Load Adjustment Factors (LAF) for MAN 2-Stroke Propulsion Engines without Slide Valves

Load	PM	PM2.5	DPM	NOx	SOx	CO	HC	VOC	CO2	CH4	N2O
66%	0.9	0.9	0.9	0.98	0.99	0.92	0.99	0.99	0.99	0.99	0.98
67%	0.91	0.91	0.91	0.98	0.99	0.92	0.99	0.99	0.99	0.99	0.98
68%	0.92	0.92	0.92	0.98	0.99	0.91	0.99	0.99	0.99	0.99	0.98
69%	0.93	0.93	0.93	0.99	0.99	0.91	1	1.00	0.99	1	0.99
70%	0.94	0.94	0.94	0.99	0.99	0.91	1	1.00	0.99	1	0.99
71%	0.94	0.94	0.94	0.99	0.99	0.91	1	1.00	0.99	1	0.99
72%	0.95	0.95	0.95	1	0.99	0.91	1.01	1.01	0.99	1.01	1
73%	0.96	0.96	0.96	1	0.99	0.91	1.01	1.01	0.99	1.01	1
74%	0.97	0.97	0.97	1	0.99	0.91	1.01	1.01	0.99	1.01	1
75%	0.98	0.98	0.98	1.01	0.99	0.9	1.01	1.01	0.99	1.01	1.01
76%	0.99	0.99	0.99	1.01	0.99	0.9	1.01	1.01	0.99	1.01	1.01
77%	1	1	1	1.01	0.99	0.9	1.01	1.01	0.99	1.01	1.01
78%	1.01	1.01	1.01	1.01	0.99	0.91	1.01	1.01	0.99	1.01	1.01
79%	1.03	1.03	1.03	1.02	0.99	0.91	1.01	1.01	1	1.01	1.02
80%	1.04	1.04	1.04	1.02	0.99	0.91	1.01	1.01	0.99	1.01	1.02
81%	1.05	1.05	1.05	1.02	0.99	0.91	1.01	1.01	0.99	1.01	1.02
82%	1.06	1.06	1.06	1.02	0.99	0.91	1.01	1.01	0.99	1.01	1.02
83%	1.07	1.07	1.07	1.02	0.99	0.92	1.01	1.01	0.99	1.01	1.02
84%	1.08	1.08	1.08	1.02	0.99	0.92	1	1.00	0.99	1	1.02
85%	1.1	1.1	1.1	1.02	0.99	0.92	1	1.00	0.99	1	1.02
86%	1.11	1.11	1.11	1.02	0.99	0.93	0.99	0.99	0.99	0.99	1.02
87%	1.12	1.12	1.12	1.02	0.99	0.93	0.99	0.99	0.99	0.99	1.02
88%	1.13	1.13	1.13	1.02	0.99	0.94	0.98	0.98	0.99	0.98	1.02
89%	1.15	1.15	1.15	1.01	0.99	0.95	0.97	0.97	0.99	0.97	1.01
90%	1.16	1.16	1.16	1.01	0.99	0.95	0.97	0.97	0.99	0.97	1.01
91%	1.17	1.17	1.17	1.01	1	0.96	0.96	0.96	1	0.96	1.01
92%	1.19	1.19	1.19	1	1	0.97	0.94	0.94	1	0.94	1
93%	1.2	1.2	1.2	1	1	0.98	0.93	0.93	1	0.93	1
94%	1.22	1.22	1.22	0.99	1	0.99	0.92	0.92	1	0.92	0.99
95%	1.23	1.23	1.23	0.99	1	1.01	0.91	0.91	1	0.91	0.99
96%	1.24	1.24	1.24	0.98	1	1.02	0.89	0.89	1	0.89	0.98
97%	1.26	1.26	1.26	0.97	1	1.03	0.87	0.87	1	0.87	0.97
98%	1.28	1.28	1.28	0.97	1	1.05	0.86	0.86	1	0.86	0.97
99%	1.29	1.29	1.29	0.96	1	1.07	0.84	0.84	1	0.84	0.96
100%	1.31	1.31	1.31	0.95	1	1.08	0.82	0.82	1	0.82	0.95

Source: San Pedro Bay Ports Emission Inventory Methodology Report Version 3-2022, Table 2.8.

Table A-18.
Vessel Emission Factor Adjustments for LAF and EFA (LAF*EFA) for MAN 2-Stroke Propulsion Engines with Slide Valves

Load	PM	PM2.5	DPM	NOx	SOx	CO	HC	VOC	CO2	CH4	N2O
1%	0.36	0.36	0.36	1.90	1.10	0.07	0.58	0.58	1.10	1.36	1.90
2%	0.37	0.37	0.37	1.86	1.10	0.07	0.57	0.57	1.10	1.32	1.86
3%	0.38	0.38	0.38	1.82	1.09	0.07	0.55	0.55	1.09	1.28	1.82
4%	0.38	0.38	0.38	1.78	1.09	0.07	0.53	0.53	1.09	1.24	1.78
5%	0.39	0.39	0.39	1.74	1.09	0.07	0.52	0.52	1.09	1.20	1.74
6%	0.40	0.40	0.40	1.70	1.08	0.07	0.50	0.50	1.08	1.17	1.70
7%	0.41	0.41	0.41	1.67	1.08	0.07	0.49	0.49	1.08	1.14	1.67
8%	0.41	0.41	0.41	1.63	1.08	0.07	0.48	0.48	1.08	1.11	1.63
9%	0.42	0.42	0.42	1.60	1.07	0.07	0.46	0.46	1.07	1.08	1.60
10%	0.43	0.43	0.43	1.57	1.07	0.07	0.45	0.45	1.07	1.05	1.57
11%	0.44	0.44	0.44	1.53	1.07	0.15	0.44	0.44	1.07	1.02	1.53
12%	0.45	0.45	0.45	1.50	1.07	0.23	0.43	0.43	1.07	0.99	1.50
13%	0.45	0.45	0.45	1.47	1.06	0.31	0.42	0.42	1.06	0.97	1.47
14%	0.46	0.46	0.46	1.45	1.06	0.38	0.40	0.40	1.06	0.94	1.45
15%	0.47	0.47	0.47	1.42	1.06	0.44	0.40	0.40	1.06	0.92	1.42
16%	0.48	0.48	0.48	1.39	1.06	0.50	0.39	0.39	1.06	0.90	1.39
17%	0.49	0.49	0.49	1.37	1.05	0.56	0.38	0.38	1.05	0.88	1.37
18%	0.49	0.49	0.49	1.34	1.05	0.61	0.37	0.37	1.05	0.86	1.34
19%	0.50	0.50	0.50	1.32	1.05	0.66	0.36	0.36	1.05	0.84	1.32
20%	0.51	0.51	0.51	1.30	1.05	0.71	0.35	0.35	1.05	0.82	1.30
21%	0.52	0.52	0.52	1.28	1.04	0.75	0.35	0.35	1.04	0.81	1.28
22%	0.53	0.53	0.53	1.26	1.04	0.79	0.34	0.34	1.04	0.79	1.26
23%	0.54	0.54	0.54	1.24	1.04	0.83	0.34	0.34	1.04	0.78	1.24
24%	0.54	0.54	0.54	1.22	1.04	0.86	0.33	0.33	1.04	0.76	1.22
25%	0.55	0.55	0.55	1.20	1.03	0.89	0.32	0.32	1.03	0.75	1.20
26%	0.56	0.56	0.56	1.19	1.03	0.91	0.32	0.32	1.03	0.74	1.19
27%	0.57	0.57	0.57	1.17	1.03	0.94	0.31	0.31	1.03	0.73	1.17
28%	0.58	0.58	0.58	1.16	1.03	0.96	0.31	0.31	1.03	0.72	1.16
29%	0.59	0.59	0.59	1.14	1.03	0.98	0.31	0.31	1.03	0.71	1.14
30%	0.60	0.60	0.60	1.13	1.02	0.99	0.30	0.30	1.02	0.70	1.13
31%	0.60	0.60	0.60	1.12	1.02	1.00	0.30	0.30	1.02	0.70	1.12
32%	0.61	0.61	0.61	1.10	1.02	1.01	0.30	0.30	1.02	0.69	1.10
33%	0.62	0.62	0.62	1.09	1.02	1.03	0.30	0.30	1.02	0.69	1.09
34%	0.63	0.63	0.63	1.08	1.02	1.03	0.29	0.29	1.02	0.68	1.08
35%	0.64	0.64	0.64	1.07	1.02	1.03	0.29	0.29	1.02	0.68	1.07
36%	0.65	0.65	0.65	1.06	1.01	1.03	0.29	0.29	1.01	0.68	1.06
37%	0.66	0.66	0.66	1.05	1.01	1.03	0.29	0.29	1.01	0.67	1.05
38%	0.67	0.67	0.67	1.05	1.01	1.03	0.29	0.29	1.01	0.67	1.05
39%	0.68	0.68	0.68	1.04	1.01	1.03	0.29	0.29	1.01	0.67	1.04
40%	0.69	0.69	0.69	1.03	1.01	1.02	0.29	0.29	1.01	0.67	1.03
41%	0.70	0.70	0.70	1.03	1.01	1.01	0.29	0.29	1.01	0.67	1.03
42%	0.70	0.70	0.70	1.02	1.01	1.01	0.29	0.29	1.01	0.68	1.02
43%	0.71	0.71	0.71	1.02	1.01	1.00	0.29	0.29	1.01	0.68	1.02
44%	0.72	0.72	0.72	1.01	1.00	0.99	0.29	0.29	1.00	0.68	1.01
45%	0.73	0.73	0.73	1.01	1.00	0.97	0.30	0.30	1.00	0.69	1.01
46%	0.74	0.74	0.74	1.00	1.00	0.96	0.30	0.30	1.00	0.69	1.00
47%	0.75	0.75	0.75	1.00	1.00	0.94	0.30	0.30	1.00	0.70	1.00
48%	0.76	0.76	0.76	1.00	1.00	0.93	0.30	0.30	1.00	0.70	1.00
49%	0.77	0.77	0.77	0.99	1.00	0.91	0.31	0.31	1.00	0.71	0.99
50%	0.78	0.78	0.78	0.99	1.00	0.89	0.31	0.31	1.00	0.71	0.99
51%	0.79	0.79	0.79	0.99	1.00	0.87	0.31	0.31	1.00	0.72	0.99
52%	0.80	0.80	0.80	0.99	1.00	0.86	0.31	0.31	1.00	0.73	0.99
53%	0.81	0.81	0.81	0.99	1.00	0.83	0.32	0.32	1.00	0.74	0.99
54%	0.82	0.82	0.82	0.99	1.00	0.81	0.32	0.32	1.00	0.75	0.99
55%	0.83	0.83	0.83	0.98	0.99	0.80	0.32	0.32	0.99	0.75	0.98
56%	0.84	0.84	0.84	0.98	0.99	0.77	0.33	0.33	0.99	0.76	0.98
57%	0.85	0.85	0.85	0.98	0.99	0.75	0.33	0.33	0.99	0.77	0.98
58%	0.86	0.86	0.86	0.98	0.99	0.73	0.34	0.34	0.99	0.78	0.98
59%	0.87	0.87	0.87	0.98	0.99	0.71	0.34	0.34	0.99	0.80	0.98
60%	0.88	0.88	0.88	0.98	0.99	0.68	0.35	0.35	0.99	0.81	0.98
61%	0.89	0.89	0.89	0.98	0.99	0.67	0.35	0.35	0.99	0.82	0.98
62%	0.90	0.90	0.90	0.98	0.99	0.64	0.36	0.36	0.99	0.83	0.98

Table A-18.
Vessel Emission Factor Adjustments for LAF and EFA (LAF*EFA) for MAN 2-Stroke Propulsion Engines with Slide Valves

Load	PM	PM2.5	DPM	NOx	SOx	CO	HC	VOC	CO2	CH4	N2O
63%	0.91	0.91	0.91	0.99	0.99	0.63	0.36	0.36	0.99	0.84	0.99
64%	0.92	0.92	0.92	0.99	0.99	0.60	0.37	0.37	0.99	0.85	0.99
65%	0.93	0.93	0.93	0.99	0.99	0.58	0.37	0.37	0.99	0.87	0.99
66%	0.94	0.94	0.94	0.99	0.99	0.56	0.38	0.38	0.99	0.88	0.99
67%	0.95	0.95	0.95	0.99	0.99	0.54	0.38	0.38	0.99	0.89	0.99
68%	0.97	0.97	0.97	0.99	0.99	0.52	0.39	0.39	0.99	0.91	0.99
69%	0.98	0.98	0.98	0.99	0.99	0.50	0.40	0.40	0.99	0.92	0.99
70%	0.99	0.99	0.99	0.99	0.99	0.48	0.40	0.40	0.99	0.93	0.99
71%	1.00	1.00	1.00	0.99	0.99	0.47	0.41	0.41	0.99	0.95	0.99
72%	1.01	1.01	1.01	0.99	0.99	0.45	0.41	0.41	0.99	0.96	0.99
73%	1.02	1.02	1.02	0.99	0.99	0.44	0.42	0.42	0.99	0.98	0.99
74%	1.03	1.03	1.03	0.99	0.99	0.42	0.43	0.43	0.99	0.99	0.99
75%	1.04	1.04	1.04	0.99	0.99	0.41	0.43	0.43	0.99	1.00	0.99
76%	1.05	1.05	1.05	0.99	0.99	0.39	0.44	0.44	0.99	1.02	0.99
77%	1.06	1.06	1.06	0.99	0.99	0.38	0.44	0.44	0.99	1.03	0.99
78%	1.07	1.07	1.07	0.99	0.99	0.37	0.45	0.45	0.99	1.05	0.99
79%	1.09	1.09	1.09	0.99	0.99	0.36	0.46	0.46	0.99	1.06	0.99
80%	1.10	1.10	1.10	0.99	0.99	0.35	0.46	0.46	0.99	1.08	0.99
81%	1.11	1.11	1.11	0.99	0.99	0.34	0.47	0.47	0.99	1.09	0.99
82%	1.12	1.12	1.12	0.99	0.99	0.34	0.47	0.47	0.99	1.10	0.99
83%	1.13	1.13	1.13	0.98	0.99	0.34	0.48	0.48	0.99	1.12	0.98
84%	1.14	1.14	1.14	0.98	0.99	0.33	0.49	0.49	0.99	1.13	0.98
85%	1.15	1.15	1.15	0.98	0.99	0.33	0.49	0.49	0.99	1.15	0.98
86%	1.16	1.16	1.16	0.98	0.99	0.33	0.50	0.50	0.99	1.16	0.98
87%	1.18	1.18	1.18	0.97	0.99	0.33	0.51	0.51	0.99	1.18	0.97
88%	1.19	1.19	1.19	0.97	0.99	0.34	0.51	0.51	0.99	1.19	0.97
89%	1.20	1.20	1.20	0.96	0.99	0.34	0.52	0.52	0.99	1.20	0.96
90%	1.21	1.21	1.21	0.96	0.99	0.35	0.52	0.52	0.99	1.22	0.96
91%	1.22	1.22	1.22	0.95	1.00	0.36	0.53	0.53	1.00	1.23	0.95
92%	1.23	1.23	1.23	0.95	1.00	0.37	0.53	0.53	1.00	1.24	0.95
93%	1.25	1.25	1.25	0.94	1.00	0.38	0.54	0.54	1.00	1.25	0.94
94%	1.26	1.26	1.26	0.93	1.00	0.40	0.55	0.55	1.00	1.27	0.93
95%	1.27	1.27	1.27	0.93	1.00	0.41	0.55	0.55	1.00	1.28	0.93
96%	1.28	1.28	1.28	0.92	1.00	0.43	0.55	0.55	1.00	1.29	0.92
97%	1.29	1.29	1.29	0.91	1.00	0.45	0.56	0.56	1.00	1.30	0.91
98%	1.31	1.31	1.31	0.90	1.00	0.48	0.56	0.56	1.00	1.31	0.90
99%	1.32	1.32	1.32	0.89	1.00	0.50	0.57	0.57	1.00	1.32	0.89
100%	1.33	1.33	1.33	0.88	1.00	0.53	0.58	0.58	1.00	1.34	0.88

Notes:

These emission factor adjustments are used to adjust standard emission factors, for MAN engines with slide valves. EF = fuel corrected EF*LAF*EFA.

These emission factor adjustments are used in peak day calculations, where the type of engine has been identified or can be assumed.

Table A-19.
Vessel Load Adjustment Factors (LAF) for MAN 2-Stroke Propulsion Engines with Slide Valves

Load	PM	PM2.5	DPM	NOx	SOx	CO	HC	VOC	CO2	CH4	N2O
1%	0.36	0.36	0.36	1.90	1.10	0.12	1.36	1.36	1.10	1.36	1.90
2%	0.37	0.37	0.37	1.86	1.1	0.12	1.32	1.32	1.1	1.32	1.86
3%	0.38	0.38	0.38	1.82	1.09	0.12	1.28	1.28	1.09	1.28	1.82
4%	0.38	0.38	0.38	1.78	1.09	0.12	1.24	1.24	1.09	1.24	1.78
5%	0.39	0.39	0.39	1.74	1.09	0.12	1.2	1.20	1.09	1.2	1.74
6%	0.4	0.4	0.4	1.7	1.08	0.12	1.17	1.17	1.08	1.17	1.7
7%	0.41	0.41	0.41	1.67	1.08	0.12	1.14	1.14	1.08	1.14	1.67
8%	0.41	0.41	0.41	1.63	1.08	0.12	1.11	1.11	1.08	1.11	1.63
9%	0.42	0.42	0.42	1.6	1.07	0.12	1.08	1.08	1.07	1.08	1.6
10%	0.43	0.43	0.43	1.57	1.07	0.12	1.05	1.05	1.07	1.05	1.57
11%	0.44	0.44	0.44	1.53	1.07	0.26	1.02	1.02	1.07	1.02	1.53
12%	0.45	0.45	0.45	1.5	1.07	0.39	0.99	0.99	1.07	0.99	1.5
13%	0.45	0.45	0.45	1.47	1.06	0.52	0.97	0.97	1.06	0.97	1.47
14%	0.46	0.46	0.46	1.45	1.06	0.64	0.94	0.94	1.06	0.94	1.45
15%	0.47	0.47	0.47	1.42	1.06	0.75	0.92	0.92	1.06	0.92	1.42
16%	0.48	0.48	0.48	1.39	1.06	0.85	0.9	0.90	1.06	0.9	1.39
17%	0.49	0.49	0.49	1.37	1.05	0.95	0.88	0.88	1.05	0.88	1.37
18%	0.49	0.49	0.49	1.34	1.05	1.04	0.86	0.86	1.05	0.86	1.34
19%	0.5	0.5	0.5	1.32	1.05	1.12	0.84	0.84	1.05	0.84	1.32
20%	0.51	0.51	0.51	1.3	1.05	1.2	0.82	0.82	1.05	0.82	1.3
21%	0.52	0.52	0.52	1.28	1.04	1.27	0.81	0.81	1.04	0.81	1.28
22%	0.53	0.53	0.53	1.26	1.04	1.34	0.79	0.79	1.04	0.79	1.26
23%	0.54	0.54	0.54	1.24	1.04	1.4	0.78	0.78	1.04	0.78	1.24
24%	0.54	0.54	0.54	1.22	1.04	1.46	0.76	0.76	1.04	0.76	1.22
25%	0.55	0.55	0.55	1.2	1.03	1.51	0.75	0.75	1.03	0.75	1.2
26%	0.56	0.56	0.56	1.19	1.03	1.55	0.74	0.74	1.03	0.74	1.19
27%	0.57	0.57	0.57	1.17	1.03	1.59	0.73	0.73	1.03	0.73	1.17
28%	0.58	0.58	0.58	1.16	1.03	1.63	0.72	0.72	1.03	0.72	1.16
29%	0.59	0.59	0.59	1.14	1.03	1.66	0.71	0.71	1.03	0.71	1.14
30%	0.6	0.6	0.6	1.13	1.02	1.68	0.7	0.70	1.02	0.7	1.13
31%	0.6	0.6	0.6	1.12	1.02	1.7	0.7	0.70	1.02	0.7	1.12
32%	0.61	0.61	0.61	1.1	1.02	1.72	0.69	0.69	1.02	0.69	1.1
33%	0.62	0.62	0.62	1.09	1.02	1.74	0.69	0.69	1.02	0.69	1.09
34%	0.63	0.63	0.63	1.08	1.02	1.75	0.68	0.68	1.02	0.68	1.08
35%	0.64	0.64	0.64	1.07	1.02	1.75	0.68	0.68	1.02	0.68	1.07
36%	0.65	0.65	0.65	1.06	1.01	1.75	0.68	0.68	1.01	0.68	1.06
37%	0.66	0.66	0.66	1.05	1.01	1.75	0.67	0.67	1.01	0.67	1.05
38%	0.67	0.67	0.67	1.05	1.01	1.75	0.67	0.67	1.01	0.67	1.05
39%	0.68	0.68	0.68	1.04	1.01	1.74	0.67	0.67	1.01	0.67	1.04
40%	0.69	0.69	0.69	1.03	1.01	1.73	0.67	0.67	1.01	0.67	1.03
41%	0.7	0.7	0.7	1.03	1.01	1.72	0.67	0.67	1.01	0.67	1.03
42%	0.7	0.7	0.7	1.02	1.01	1.71	0.68	0.68	1.01	0.68	1.02
43%	0.71	0.71	0.71	1.02	1.01	1.69	0.68	0.68	1.01	0.68	1.02
44%	0.72	0.72	0.72	1.01	1	1.67	0.68	0.68	1	0.68	1.01
45%	0.73	0.73	0.73	1.01	1	1.65	0.69	0.69	1	0.69	1.01
46%	0.74	0.74	0.74	1	1	1.62	0.69	0.69	1	0.69	1
47%	0.75	0.75	0.75	1	1	1.6	0.7	0.70	1	0.7	1
48%	0.76	0.76	0.76	1	1	1.57	0.7	0.70	1	0.7	1
49%	0.77	0.77	0.77	0.99	1	1.54	0.71	0.71	1	0.71	0.99
50%	0.78	0.78	0.78	0.99	1	1.51	0.71	0.71	1	0.71	0.99
51%	0.79	0.79	0.79	0.99	1	1.48	0.72	0.72	1	0.72	0.99
52%	0.8	0.8	0.8	0.99	1	1.45	0.73	0.73	1	0.73	0.99

Table A-19.
Vessel Load Adjustment Factors (LAF) for MAN 2-Stroke Propulsion Engines with Slide Valves

Load	PM	PM2.5	DPM	NOx	SOx	CO	HC	VOC	CO2	CH4	N2O
53%	0.81	0.81	0.81	0.99	1	1.41	0.74	0.74	1	0.74	0.99
54%	0.82	0.82	0.82	0.99	1	1.38	0.75	0.75	1	0.75	0.99
55%	0.83	0.83	0.83	0.98	0.99	1.35	0.75	0.75	0.99	0.75	0.98
56%	0.84	0.84	0.84	0.98	0.99	1.31	0.76	0.76	0.99	0.76	0.98
57%	0.85	0.85	0.85	0.98	0.99	1.27	0.77	0.77	0.99	0.77	0.98
58%	0.86	0.86	0.86	0.98	0.99	1.24	0.78	0.78	0.99	0.78	0.98
59%	0.87	0.87	0.87	0.98	0.99	1.2	0.8	0.80	0.99	0.8	0.98
60%	0.88	0.88	0.88	0.98	0.99	1.16	0.81	0.81	0.99	0.81	0.98
61%	0.89	0.89	0.89	0.98	0.99	1.13	0.82	0.82	0.99	0.82	0.98
62%	0.9	0.9	0.9	0.98	0.99	1.09	0.83	0.83	0.99	0.83	0.98
63%	0.91	0.91	0.91	0.99	0.99	1.06	0.84	0.84	0.99	0.84	0.99
64%	0.92	0.92	0.92	0.99	0.99	1.02	0.85	0.85	0.99	0.85	0.99
65%	0.93	0.93	0.93	0.99	0.99	0.98	0.87	0.87	0.99	0.87	0.99
66%	0.94	0.94	0.94	0.99	0.99	0.95	0.88	0.88	0.99	0.88	0.99
67%	0.95	0.95	0.95	0.99	0.99	0.92	0.89	0.89	0.99	0.89	0.99
68%	0.97	0.97	0.97	0.99	0.99	0.88	0.91	0.91	0.99	0.91	0.99
69%	0.98	0.98	0.98	0.99	0.99	0.85	0.92	0.92	0.99	0.92	0.99
70%	0.99	0.99	0.99	0.99	0.99	0.82	0.93	0.93	0.99	0.93	0.99
71%	1	1	1	0.99	0.99	0.79	0.95	0.95	0.99	0.95	0.99
72%	1.01	1.01	1.01	0.99	0.99	0.76	0.96	0.96	0.99	0.96	0.99
73%	1.02	1.02	1.02	0.99	0.99	0.74	0.98	0.98	0.99	0.98	0.99
74%	1.03	1.03	1.03	0.99	0.99	0.71	0.99	0.99	0.99	0.99	0.99
75%	1.04	1.04	1.04	0.99	0.99	0.69	1	1.00	0.99	1	0.99
76%	1.05	1.05	1.05	0.99	0.99	0.66	1.02	1.02	0.99	1.02	0.99
77%	1.06	1.06	1.06	0.99	0.99	0.64	1.03	1.03	0.99	1.03	0.99
78%	1.07	1.07	1.07	0.99	0.99	0.63	1.05	1.05	0.99	1.05	0.99
79%	1.09	1.09	1.09	0.99	0.99	0.61	1.06	1.06	0.99	1.06	0.99
80%	1.1	1.1	1.1	0.99	0.99	0.6	1.08	1.08	0.99	1.08	0.99
81%	1.11	1.11	1.11	0.99	0.99	0.58	1.09	1.09	0.99	1.09	0.99
82%	1.12	1.12	1.12	0.99	0.99	0.57	1.1	1.10	0.99	1.1	0.99
83%	1.13	1.13	1.13	0.98	0.99	0.57	1.12	1.12	0.99	1.12	0.98
84%	1.14	1.14	1.14	0.98	0.99	0.56	1.13	1.13	0.99	1.13	0.98
85%	1.15	1.15	1.15	0.98	0.99	0.56	1.15	1.15	0.99	1.15	0.98
86%	1.16	1.16	1.16	0.98	0.99	0.56	1.16	1.16	0.99	1.16	0.98
87%	1.18	1.18	1.18	0.97	0.99	0.56	1.18	1.18	0.99	1.18	0.97
88%	1.19	1.19	1.19	0.97	0.99	0.57	1.19	1.19	0.99	1.19	0.97
89%	1.2	1.2	1.2	0.96	0.99	0.58	1.2	1.20	0.99	1.2	0.96
90%	1.21	1.21	1.21	0.96	0.99	0.59	1.22	1.22	0.99	1.22	0.96
91%	1.22	1.22	1.22	0.95	1	0.61	1.23	1.23	1	1.23	0.95
92%	1.23	1.23	1.23	0.95	1	0.63	1.24	1.24	1	1.24	0.95
93%	1.25	1.25	1.25	0.94	1	0.65	1.25	1.25	1	1.25	0.94
94%	1.26	1.26	1.26	0.93	1	0.67	1.27	1.27	1	1.27	0.93
95%	1.27	1.27	1.27	0.93	1	0.7	1.28	1.28	1	1.28	0.93
96%	1.28	1.28	1.28	0.92	1	0.73	1.29	1.29	1	1.29	0.92
97%	1.29	1.29	1.29	0.91	1	0.77	1.3	1.30	1	1.3	0.91
98%	1.31	1.31	1.31	0.9	1	0.81	1.31	1.31	1	1.31	0.9
99%	1.32	1.32	1.32	0.89	1	0.85	1.32	1.32	1	1.32	0.89
100%	1.33	1.33	1.33	0.88	1	0.9	1.34	1.34	1	1.34	0.88

Source: San Pedro Bay Ports Emission Inventory Methodology Report Version 3-2022, Table 2.7.

Table A-20.
2021/2022 Vessel Calls

TI VESSEL SUMMARY JULY 2021 -JUNE 2022							
YEAR BUILT	**TYPE**	**SIZE / L.O.A**	**VESSELS**	**IMO NUMBER**	***ARRIVED***	***DEPARTED***	***MT LOADED***
2010	BULK CARRIER	179.90 M	GIORGIOS B	9459383	7/22 - 1000H	7/24 - 0240H	27,502
2017	BULK CARRIER	199.9 M	CL LINDY	9720988	8/2 - 0900H	8/6 - 1900H	48,593
2013	BULK CARRIER	180.0 M	DOGAN	9625475	8/6 - 2130H	8/8 - 2320H	33,000
2017	BULK CARRIER	181.0 M	MYKONOS DAWN	9762481	8/11 - 1130H	8/14 - 0001H	33,000
2008	BULK CARRIER	189.99 M	AGIA EIRINI FORCE	9340063	8/16 - 0645H	8/23 - 2330H	46,097
2014	BULK CARRIER	179.97 M	ST PATRICK	9691498	9/7 - 0715H	9/9 - 1400H	32,999
2014	BULK CARRIER	199.99 M	INTHIRA NAREE	9732199	9/23 - 0405H	9/27 - 0015H	47,250
2013	BULK CARRIER	189.99 M	STAR DORADO	9594614	9/30 - 1730H	10/7- 1225H	33,000
2013	BULK CARRIER	179.98 M	NEDIM	9625463	10/26 - 0830H	10/31 - 0400H	33,400
2009	BULK CARRIER	179.90 M	YIHAI	9459395	11/1 - 0500H	11/3 - 0600H	31,080
2010	BULK CARRIER	179.90 M	WESTERN MAPLE	9587154	11/15 - 0720H	11/17 - 1210H	27,702
2014	BULK CARRIER	199.98 M	ERIETTA	9713959	12/21 - 1330H	12/27 - 0330H	47,250
2019	BULK CARRIER	199.99 M	BULK MUSTIQUE	9853606	1/8 - 0500H	1/11 - 2200H	46,199
2005	BULK CARRIER	183.00 M	NEW HUNTER	9296781	1/24 - 1030H	1/27 - 0810H	42,000
2015	BULK CARRIER	199.99 M	CLIPPER KALAVRYTA	9663128	1/28 - 1100H	1/31 - 0240H	36,750
2014	BULK CARRIER	179.99 M	STRATEGIC EQUITY	9689902	2/2 - 0800H	2/3 - 2145H	28,078
2017	BULK CARRIER	199.92 M	SANTA VALENTINA	9812482	2/18 - 0600H	2/22 - 0300H	48,402
2003	BULK CARRIER	177.00 M	ACHILLES BULKER	9270907	2/23 - 0630H	2/25 - 1630H	30,249
2014	BULK CARRIER	179.99 M	STRATEGIC HARMONY	9689897	3/9 - 0630H	3/12 - 0320H	32,007
2015	BULK CARRIER	179.95 M	BEN WYVIS	9703813	3/28 - 0920H	3/30 - 0525H	34,666
2011	BULK CARRIER	179.90 M	CLIPPER SELO	9543251	3/30 - 0815H	4/1 - 0325H	27,503
2013	BULK CARRIER	189.99 M	OYSTER BAY	9718636	4/23 - 0700H	4/27 - 2215H	46,370
2015	BULK CARRIER	179.99 M	KEN UN	9727089	5/2 - 0545H	5/4 - 1530H	33,000
2014	BULK CARRIER	179.97 M	BUNUN DYNASTY	9707821	5/13 - 1630H	5/16 - 2215H	33,000
2020	BULK CARRIER	182.87 M	ST DAVID	9864899	5/24 - 1430H	5/27 - 0500H	31,500
2011	BULK CARRIER	179.99 M	ATLANTIC GLORY	9536844	05/27 - 0715H	5/29 - 2030H	30,800
2013	BULK CARRIER	180.00 M	NORDIC DALIAN	9667588	6/6 - 0620H	6/7 - 1810H	24,200
2010	BULK CARRIER	177.40 M	CETUS	9557238	6/13 - 0600H	6/16 - 0125H	30,673

Source:
Provided by SAR's William Halligan via e-mail to POLA's Nicole Enciso on 11/12/22.

Table A-21.
Harbor Craft Data

			HC Characteristics					HC Activity										Vessel Activity				HC Energy Demand	
								HC Engine Activity per HC							HC Count per vessel							Berth	Berth
Year	HC Classification	Engine Type	Engine Count per HC	Average MY	Average HP per Engine	Average kW per Engine	Load Factor	At Berth (engine hrs)	Zone 1 (engine hr/one-way trip)	Zone 2 (engine hr/one-way trip)	Zone 3 (engine hr/one-way trip)	Zone 4 (engine hr/one-way trip)	Zones 3-5 (engine hr/one-way trip)	Zone 6 (engine hr/one-way trip)	At Berth	Zone 1	Zone 2	Peak Day Vessel Calls to Berth (calls/day)	Peak Day Vessel Transits (one-way trips/day)	Average Annual Vessel Calls to Berth (calls/yr)	Average Annual Vessel Transits (one-way trips/yr)	Peak Day (kW-hr/day)	Annual (kW-hr/yr)
2021/2022 Baseline																							
Vessel Assist	Assist Tugboat	Propulsion	2		2,651	1,978	0.16	1.0	1.6	0.4	0.0	0.0	0.0	0.0	2	2	1	1	2	28	56	633	17,719
		Auxiliary	2		208	155	0.34	1.0	1.6	0.4	0.0	0.0	0.0	0.0	2	2	1	1	2	28	56	106	2,954
2021/2022 Baseline Total																							
Proposed Project - Phase 1																							
Vessel Assist	Assist Tugboat	Propulsion	2		2,651	1,978	0.16	1.0	1.6	0.4	0.0	0.0	0.0	0.0	2	2	1	1	2	28	56	633	17,719
		Auxiliary	2		208	155	0.34	1.0	1.6	0.4	0.0	0.0	0.0	0.0	2	2	1	1	2	28	56	106	2,954
Proposed Project - Phase 1- Total																							
Proposed Project - Phase 2																							
Vessel Assist	Assist Tugboat	Propulsion	2		2,651	1,978	0.16	1.0	1.6	0.4	0.0	0.0	0.0	0.0	2	2	1	1	1	1	2	633	633
		Auxiliary	2		208	155	0.34	1.0	1.6	0.4	0.0	0.0	0.0	0.0	2	2	1	1	1	1	2	106	106
Proposed Project - Phase 2 - Total																							

Notes:

Tugboats are used to assist vesselss during maneuvering. In general, two tugboats are needed at berth and in Zone 1 for all vessels; one tugboat is needed in Zone 2 for all vessels.

Tugboat engine characteristics are from the 2022 Port Emissions Inventory, Tables 4.1 and 4.2.

Conservatively assumes no change in future tugboat emission factors.

Emission Factors:

EPA emission standards, which are reported as NOx+THC, were convered by Nox and HC assuming 95% and 5% are Nox and HC, respectively, per Carl Moyer Program guidelines.

SOx emission factor is based on 15 ppm fuel sulfur content.

PM2.5 is 89% of PM10, per SCAQMD 2006 Final Methodology to Calculate PM2.5 and PM 2.5 Significance Thresholds, Table 5.

CO2 and N20 emission factors are from IVL: Methodology for Calculating Emissions from Ships: Update on Emission Factors, 2004, also summarized in POLA 2009 Emissions Inventory, Appendix B. CH4 is 2% of HC, per IVL study.

There are no mitigation measures for operational HC. HC controls are implemented Port-wide via CAAP measures.

Table A-22.
HC Activity: Time required to assist vessel

	Berth (hr/call)	**Zone 1: Harbor** (hr/one-way trip)	**Zone 2: Breakwater to start of PZ** (hr/one-way trip)	**Zone 3: PZ to 20nm (hr/one-way trip)**	**Zone 4: 20nm-40nm (hr/one-way trip)**	**Zone 5: 40nm to SCAB Boundary (hr/one-way trip)**	**Zone 6: SCAB to CA Boundary (hr/one-way trip)**	**Zones 3-5: start of PZ to SCAB Boundary** (hr/one-way trip)
Propulsion	0.5	0.80	0.19	0.00	0.00	0.00	0.00	0.00
Auxiliary	0.5	0.80	0.19	0.00	0.00	0.00	0.00	0.00

Notes:

Berth time assumed as 0.5 hr total per vessel call.

Zone 1: Transit time is the transit distance in Zone 1 (harbor transit) divided by the speed in Zone 1, times 1.3 to account for tug movement and assist time (2011 APL EIR/EIS, Appendix E, Table 1.3-221 or *Draft - Emission Factor Assumptions.docx 7/20/17*).

Zone 2: Distance at which tugboats meet up with OGVs into Zone 2.

HC assist vessels at berth and in zones 1 and 2.

Table A-23.
Harbor Craft Emission Factors - EPA Standards (g/kW-hr)

					g/kw-hr											
Engine Displacement	**(kW)**	**EPA Tier**	**MY**	**NMHC+NOx**	**PM10**	**PM2.5**	**DPM**	**NOx**	**SOX**	**CO**	**HC**	**VOC**	**CO2**	**CH4**	**N2O**
Category 1	**HC auxiliary engines**														
<0.9	≥37	Tier 2	2005	**7.50**	**0.40**	0.36	0.40	7.1	0.160	**5.00**	0.38	0.39	709	0.021	0.031
0.9 < displ < 1.2	all	Tier 2	2004	**7.20**	**0.30**	0.27	0.30	6.8	0.160	**5.00**	0.36	0.38	709	0.021	0.031
1.2 < displ < 2.5	all	Tier 2	2004	**7.20**	**0.20**	0.18	0.20	6.8	0.160	**5.00**	0.36	0.38	709	0.021	0.031
2.5 < displ < 5	all	Tier 2	2007	**7.20**	**0.20**	0.18	0.20	6.8	0.160	**5.00**	0.36	0.38	709	0.018	0.031
<0.9	<19	Tier 3	2009	**7.5**	**0.40**	0.36	0.40	7.1	0.160	**6.60**	0.38	0.39	709	0.018	0.031
<0.9	19-75	Tier 3	2009-2013	**7.5**	**0.30**	0.27	0.30	7.1	0.160	**5.50**	0.38	0.39	709	0.018	0.031
<0.9	19-75	Tier 3	2014+	**4.7**	**0.30**	0.27	0.30	4.5	0.160	**5.00**	0.24	0.25	707	0.017	0.031
<0.9	>75	Tier 3	2012+	**5.4**	**0.14**	0.12	0.14	5.1	0.160	**5.00**	0.27	0.28	709	0.018	0.031
0.9 < displ < 1.2	all	Tier 3	2013+	**5.4**	**0.12**	0.11	0.12	5.1	0.160	**5.00**	0.27	0.28	707	0.017	0.031
1.2 < displ < 2.5	<600	Tier 3	2014-2017	**5.6**	**0.11**	0.10	0.11	5.3	0.160	**5.00**	0.28	0.29	707	0.017	0.031
1.2 < displ < 2.5	<600	Tier 3	2018+	**5.6**	**0.10**	0.09	0.10	5.3	0.160	**5.00**	0.28	0.29	707	0.017	0.031
1.2 < displ < 2.5	≥600	Tier 3	2014+	**5.6**	**0.11**	0.10	0.11	5.3	0.160	**5.00**	0.28	0.29	707	0.017	0.031
2.5 < displ < 3.5	<600	Tier 3	2013-2017	**5.6**	**0.11**	0.10	0.11	5.3	0.160	**5.00**	0.28	0.29	707	0.017	0.031
2.5 < displ < 3.5	<600	Tier 3	2018+	**5.6**	**0.10**	0.09	0.10	5.3	0.160	**5.00**	0.28	0.29	707	0.017	0.031
2.5 < displ < 3.5	≥600	Tier 3	2013+	**5.6**	**0.11**	0.10	0.11	5.3	0.160	**5.00**	0.28	0.29	707	0.017	0.031
3.5 ≤ D < 7	<600	Tier 3	2012-2017	**5.8**	**0.11**	0.10	0.11	5.5	0.160	**5.00**	0.29	0.31	707	0.017	0.031
3.5 ≤ D < 7	<600	Tier 3	2018+	**5.8**	**0.10**	0.09	0.10	5.5	0.160	**5.00**	0.29	0.31	707	0.017	0.031
3.5 ≤ D < 7	≥600	Tier 3	2012+	**5.8**	**0.11**	0.10	0.11	5.5	0.160	**5.00**	0.29	0.31	709	0.018	0.031
	600-1400	Tier 4	2017+		**0.04**	0.04	0.04	**1.8**	0.160	**5.00**	**0.19**	0.20	707	0.017	0.031
	1400-2000	Tier 4	2016+		**0.04**	0.04	0.04	**1.8**	0.160	**5.00**	**0.19**	0.20	707	0.017	0.031
	2000-3700	Tier 4	2014+		**0.04**	0.04	0.04	**1.8**	0.160	**5.00**	**0.19**	0.20	707	0.017	0.031
	>3700	Tier 4	2014-2015		**0.12**	0.11	0.12	**1.8**	0.160	**5.00**	**0.19**	0.20	707	0.017	0.031
	>3700	Tier 4	2016+		**0.06**	0.05	0.06	**1.8**	0.160	**5.00**	**0.19**	0.20	707	0.017	0.031
Category 2	**HC propulsion engines**														
			MY												
5.0 ≤ D < 15	all	Tier 2	2007	**7.8**	**0.27**	0.24	0.27	7.4	0.160	**5.00**	0.39	0.41	709	0.026	0.031
15 ≤ D < 20	< 3300 kW	Tier 2	2007	**8.7**	**0.50**	0.45	0.50	8.3	0.160	**5.00**	0.44	0.46	709	0.026	0.031
15 ≤ D < 20	≥ 3300 kW	Tier 2	2007	**9.8**	**0.50**	0.45	0.50	9.3	0.160	**5.00**	0.49	0.52	709	0.026	0.031
20 ≤ D < 25	all	Tier 2	2007	**9.8**	**0.50**	0.45	0.50	9.3	0.160	**5.00**	0.49	0.52	709	0.026	0.031
25 ≤ D < 30	all	Tier 2	2007	**11.0**	**0.50**	0.45	0.50	10.5	0.160	**5.00**	0.55	0.58	709	0.026	0.031
7 ≤ D < 15	<2000	Tier 3	2013+	**6.2**	**0.14**	0.12	0.14	5.9	0.160	**5.00**	0.31	0.33	686	0.025	0.031
7 ≤ D < 15	2000-3700	Tier 3	2013+	**7.8**	**0.14**	0.12	0.14	7.4	0.160	**5.00**	0.39	0.41	686	0.025	0.031
15 ≤ D < 20	<2000	Tier 3	2014+	**7.0**	**0.34**	0.30	0.34	6.7	0.160	**5.00**	0.35	0.37	686	0.025	0.031
20 ≤ D < 25	<2000	Tier 3	2014+	**9.8**	**0.27**	0.24	0.27	9.3	0.160	**5.00**	0.49	0.52	686	0.025	0.031
25 ≤ D < 30	<2000	Tier 3	2014+	**11.0**	**0.27**	0.24	0.27	10.5	0.160	**5.00**	0.55	0.58	686	0.025	0.031
all	2000-3700	Tier 4	2014		**0.04**	0.04	0.04	**1.8**	0.160	**5.00**	**0.19**	0.20	686	0.025	0.031
<15	>3700	Tier 4	2014		**0.12**	0.11	0.12	**1.8**	0.160	**5.00**	**0.19**	0.20	686	0.025	0.031
15 ≤ D < 30	>3700	Tier 4	2014		**0.25**	0.22	0.25	**1.8**	0.160	**5.00**	**0.19**	0.20	686	0.025	0.031
all	>3700	Tier 4	2016		**0.06**	0.05	0.06	**1.8**	0.160	**5.00**	**0.19**	0.20	686	0.025	0.031
all	1400-2000	Tier 4	2016		**0.04**	0.04	0.04	**1.8**	0.160	**5.00**	**0.19**	0.20	686	0.025	0.031
all	600-1400	Tier 4	2017		**0.04**	0.04	0.04	**1.8**	0.160	**5.00**	**0.19**	0.20	686	0.025	0.031

Source:
Federal Marine Compression-Ignition Engines - Exhaust Emission Standards Reference Guide. Last accessed November 2022 at: https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P100ZP4H.pdf
Tier 1 and Tier 2 standards: 40CFR Part 94.8
Tier 3 and Tier 4 standards: 40CFR Part 1042.101

EPA Tier 1 emissions standards for marine engines do not specify restrictions to PM, SOx, CO, or VOC. NOx reflects Marpol Annex VI (17 g/kW-hr). PM10, SOX, CO and VOC emissions factors were obtained from EPA offroad emission engine standards for Tier 1 engines.
EPA Tier 2 and Tier 3 emission standards are reported as NOx+THC. 5% is HC per Carl Moyer Program guidelines. 95% is NOx.
SOx emission factor is based on 15 ppm fuel sulfur content.
CO2, CH4 and N2O emission factors are zero-hour factors from the Port's 2023 Emissions Inventory Methodology Document, Version 4, Appendix A. Last accessed in October 2023 at: https://kentico.portoflosangeles.org/getmedia/ad5ec383-8dc6-4652-ae0d-81b6ea4c7819/SPBP_Emissions_Inventory_Methodology_v3a. Zero-hour factors are appropriate because engine deterioration does not significantly affect GHG emission factors (per Emissions Inventory Methodology Report Table 3.2).
Bold numbers represent actual emission standards.

Harbor Craft GHG Emission Factors

Engine Type	**Year**		**Power**		**Zero-Hour Emission Factors (g/kw-hr)**		
	Min	**Max**	**Min**	**Max**	**CO2**	**CH4**	**N2O**
Propulsion	0	1988	597	74,569	709	0.146	0.031
	1988	2000	597	74,569	709	0.102	0.031
	2000	2004	597	74,569	709	0.102	0.031
	2004	2007	597	74,569	709	0.026	0.031
	2007	2013	597	74,569	709	0.026	0.031
	2013	2017	597	74,569	686	0.025	0.03
	2017	2051	597	74,569	662	0.005	0.029
Auxiliary	0	1988	130	224	709	0.153	0.031
	1988	2000	130	224	709	0.102	0.031
	2000	2004	130	224	709	0.024	0.031
	2004	2007	130	224	709	0.021	0.031
	2007	2013	130	224	709	0.018	0.031
	2013	2051	130	224	707	0.017	0.031

Source:
CO2, CH4 and N2O emission factors are zero-hour factors from the Port's 2023 Emissions Inventory Methodology Document, Version 4, Appendix A. Last accessed in October 2023 at: https://kentico.portoflosangeles.org/getmedia/ad5ec383-8dc6-4652-ae0d-81b6ea4c7819/SPBP_Emissions_Inventory_Methodology_v3a. Zero-hour factors are appropriate because engine deterioration does not significantly affect GHG emission factors (per Emissions Inventory Methodology Report Table 3.2).

Table A-24.

HC Fuel Correction Factors

Equipment Model Year	PM	NOx	SOx	CO	HC		CO2	CH4	N2O
<2006	0.71	0.93	0.04	1	0.90		1	0.90	0.93
2007-2010	0.86	0.95	0.04	1	0.90		1	0.90	0.95
2011+	0.90	0.95	0.04	1	0.90		1	0.90	0.95

Notes:

EPA emission factors assume diesel fuel with higher sulfur content than USLD currently used in California. To account for the required use of ULSD these fuel correction factors are used.

Source:

San Pedro Bay Ports Emissions Inventory Methodology Report, Version 4, Table 3.4.

Table A-25.

SOx Emission Factor

Harbor Craft		0.00552	g/hp-hr	0.007400	g/kw-hr
Dredging Equipment	use OFFROAD BSCF and convert to g SOx /hp-hr				
SOx (gms/hp-hr) = (S content in X/1,000,000) x (MW SO2/ MW S) x BSFC =					
Where:					
X = S content in parts per million (ppm)				15	ppm
S MW = Molecular Weight				32	
SO2 MW = Molecular Weight				64	
BSFC for harbor craft = Brake Specific Fuel Consumption (per San Pedro Bay Ports Emissions Inventory Methodology Report, Version 3, Section 3.4).				184	(g/hp-hr)

Table A-26.
Habor Craft Load Factor

Type	Main Engine	Auxiliary Engine
ATB	0.5	0.5
Assist tugboat	0.16	0.34
Barge	na	0.31
Commercial fishing	0.27	0.44
Crew boat	0.26	0.4
Excursion	0.27	0.4
Ferry	0.33	0.39
Government	0.33	0.32
Ocean tug	0.5	0.5
Tugboat	0.16	0.34
Dive boat Work boat	0.33	0.32

Source:
San Pedro Bay Ports Emissions Inventory Methodology Report, Version 4, Table 3.1.

Table A-27.
Peak Day Truck Emissions

	Emissions (lb/day)						
Analysis Year	**PM_{10}**	**$PM_{2.5}$**	**DPM**	**NO_x**	**SO_x**	**CO**	**VOC**
2021/2022							
2021/2022 Offsite Transit	9.76	3.45	1.31	178.84	0.66	28.51	3.44
2021/2022 Onsite Transit	0.85	0.14	0.01	2.30	0.01	0.71	0.15
2021/2022 Onsite Idling	0.00	0.00	0.00	4.78	0.01	3.43	0.48
2021/2022 Total	*10.61*	*3.60*	*1.32*	*185.93*	*0.68*	*32.65*	*4.07*
Proposed Project - Phase 1 - 2023							
2023 Offsite Transit	9.23	3.14	1.09	83.39	0.68	7.84	0.53
2023 Onsite Transit	0.84	0.13	0.00	1.68	0.01	0.25	0.02
2023 Onsite Idling	0.00	0.00	0.00	3.46	0.01	4.38	0.31
2023 Total	*10.07*	*3.27*	*1.10*	*88.53*	*0.69*	*12.47*	*0.86*

Notes:

2021/2022 Peak Day Truck Activity (1-way trips/day):	676	2021/2022 Annual Truck Activity (1-way trips/year	187,132
2023 Peak Day Truck Activity (1-way trips/day):	676	2023 Annual Truck Activity (1-way trips/year):	187,132

Source:

Vehicle activity was provided by SAR. Se Table A-2.

Table A-28.
Annual Truck Emissions

	Emissions (lb/yr)							mton/yr			
Analysis Year	**PM_{10}**	**$PM_{2.5}$**	**DPM**	**NO_x**	**SO_x**	**CO**	**VOC**	**CO_2**	**CH_4**	**N_2O**	**CO2e**
2021/2022											
2021/2022 Offsite Transit	2,702.6	956.3	363.1	49,508.3	183.64	7,893.4	952.0	9,113.4	0.2	1.5	9,551.7
2021/2022 Onsite Transit	234.6	38.6	1.8	636.4	1.76	196.7	41.4	88.7	0.0	0.0	93.1
2021/2022 Onsite Idling	0.5	0.5	0.5	1,324.0	2.1	949.3	132.4	105.5	0.0	0.0	106.3
2021/2022 Total	*2,937.71*	*995.37*	*365.4*	*51,468.6*	*187.48*	*9,039.3*	*1,125.9*	*9,307.6*	*0.3*	*1.5*	*9,751.0*
Proposed Project - Phase 1 - 2023											
2023 Offsite Transit	2,555.6	868.1	302.9	23,085.0	188.7	2,170.2	147.5	9,123.8	0.1	1.4	9,555.0
2023 Onsite Transit	232.6	37.1	0.5	464.1	1.7	68.7	4.2	82.9	0.0	0.0	86.9
2023 Onsite Idling	0.4	0.3	0.3	956.7	1.9	1,212.1	86.8	92.0	0.0	0.0	92.2
2023 Total	*2,788.56*	*905.51*	*303.7*	*24,505.8*	*192.29*	*3,451.0*	*238.4*	*9,298.7*	*0.1*	*1.5*	*9,734.1*

Table A-29.
Truck Emissions by Emission Type

	Activity				Engine Exhaust (lb/yr)							mton/yr			Non Exhaust (lb/yr) [4]		Indirect GHG (mton/yr)		
Analysis Year	Trucks per Year [1]	1-Way Distance Traveled (miles)	2, 1-way trips per round-trip	Energy Consumption (kWh/mi)	PM_{10}	$PM_{2.5}$	DPM	NO_x	SO_x	CO	VOC	CO_2	CH4	N2O	PM_{10}	$PM_{2.5}$	CO_2	CH4	N2O
Offsite Transit																			
2021/2022	93,566	30	2	0.0000	363.7	348.0	363.1	49,508.3	183.6	7,893.4	904.1	9,113.4	0.2	1.5	2,338.8	608.3	0.00E+00	0.00E+00	0.00E+00
2023	93,566	30	2	0.0002	303.1	290.0	302.9	23,085.0	188.7	2,170.2	140.0	9,123.5	0.1	1.4	2,252.5	578.1	3.25E-01	2.02E-05	2.53E-06
Onsite Transit [2]																			
2021/2022	93,566	0.15	2	0.0000	1.8	1.7	1.8	636.4	1.8	196.7	39.3	88.7	0.0	0.0	232.8	36.8	0.00E+00	0.00E+00	0.00E+00
2023	93,566	0.15	2	0.0004	0.5	0.5	0.5	464.1	1.7	68.7	3.9	82.9	0.0	0.0	232.1	36.6	2.64E-03	1.65E-07	2.06E-08
Onsite Idling [3]		***(hr/call)***																	
2021/2022	93,566	0.17			0.5	0.5	0.5	1,324.0	2.1	949.3	125.8	105.5	0.0	0.0					
2023	93,566	0.17			0.4	0.3	0.3	956.7	1.9	1,212.1	82.4	92.0	0.0	0.0					

Fuel and Electricity Use	
DGE (gal/yr)	Electricity (kW-hr/yr)
Offsite Transit	
949,523	0
937,505	1,393
Onsite Transit	
8,855	0
8,199	11

Source:
Truck activity was provided by *SAR in SAR_ThroughputData_11_1_2022.pdf* . Truck transit distance was provided by SAR's *William Halligan via e-mail to POLA's Nicole Enciso on 11/12/22* .
Container and delivery truck (FedEx, UPS) activity was provided by SAR in Port CEQA Follow-up Questions_20230126.docx.

Notes:
1. Truck activity includes trucks that bring material to the facility to be sorted and shipped, container trucks used to take segregated non-ferrous material (aluminum and copper) to other Port terminals, and delivery trucks (FedEx, UPS). Container and delivery trucks amount to 1% and 5%, respectively, of total truck a
2. On-site transit distance calculated from Google-Earth to be: 0.15 miles 1-way
3. On-site idling reflects: 10 Conservatively doubled from what is reflected in on-site signage.
4. Non Exhaust PM emissions include tire wear, brake wear, and entrained road dust.

Table A-30.
Truck Composite Emission Factors

	Engine Exhaust Composite Emission Factors										Tire and Brake Wear Composite Emission Factor				Road Dust Emission Factors				Indirect GHG Emission Factors fro			Energy Consumption
Analysis Year	PM10	PM2.5	DPM	NOx	SOx	CO	VOC	CO2	CH4	N2O	PM10 tire wear	PM10 brake wear	PM2.5 tire wear	PM2.5 brake wear	PM10 Road Dust (Offsite)	PM2.5 Road Dust (Offsite)	PM10 Road Dust (onsite)	PM2.5 Road Dust (onsite)	CO2	CH4	N2O	
Offsite Transit	(grams/mile)										(grams/mile)				(grams/mile)				(lb/MW-hr)			kW-hr/mi
2021/2022	0.029388	0.028115	0.029338	4.000199	0.014838	0.637773	0.073052	1623.349899	0.042625	0.258374	0.0360	0.0859	0.0090	0.0301	0.07	0.01			513.50	0.03	0.00	0
2023	0.024488	0.023428	0.024470	1.865232	0.015245	0.175349	0.011314	1625.140577	0.011893	0.256745	0.0360	0.0789	0.0090	0.0276	0.07	0.01			513.50	0.03	0.00	0.000248
Onsite Transit	(grams/mile)										(grams/mile)				(grams/mile)				(lb/MW-hr)			kW-hr/mi
2021/2022	0.028986	0.027724	0.028768	10.283476	0.028463	3.178298	0.634726	3158.631373	0.302476	0.504722		0.1492		0.0522			3.61	0.54	513.50	0.03	0.00	0
2023	0.008552	0.008179	0.008474	7.499523	0.027588	1.109952	0.063764	2954.249865	0.074631	0.467335		0.1371		0.0480			3.61	0.54	513.50	0.03	0.00	0.000404
Onsite Idling	(g/hr)																					
2021/2022	0.015699	0.014960	0.014114	38.510920	0.060468	27.612622	3.658601	6765.895167	1.925815	0.000000									513.50	0.03	0.00	
2023	0.010371	0.009907	0.009956	27.828156	0.055128	35.257056	2.396398	5897.218746	0.645632	0.000000									513.50	0.03	0.00	

Fuel and Electricity Use Rate	
Composite DGE Fuel Rate (gal/mi)	Electricity (kW-hr/mi)
Offsite Transit	
0.1691	0.0000
0.1670	0.0002
Onsite Transit	
0.3155	0.0000
0.2921	0.0004

Source:
EMFAC 2021

Notes:
EMFAC outputs truck fuel use as diesel galon equivalent (DGE) per communication with CARB in March 2023
Idling fuel rate and enrgy use are not avaiable in EMFAC PL.

Source:

Composite emission factors reflect composite of diesel, natural gas, plug-in hybrid, and electric vehicles.
Exhaust emission factors were obtained from EMFAC 2021.
PM tire and brake wear emission factors were obtained from EMFAC 2021.
Onsite idling emission factors were obtained from EMFAC PL 2021.
PM entrained road dust emission factors are from CARB Miscellaneous Process Methodology 7.9, Entrained Road Travel, Paved Road Dust. Revised and Updated March 2021.
GHG indirect emission factors from the use of electricity were obtained from The Climate Registry 2022 Emission Factors. Table 3.1 for CAMX eGrid Subregion. May 2022.

Table A-31.
EMFAC Output - Worker Vehicle Emission Factors

Source: EMFAC2021 (v1.0.2) Emissions Inventory
Region Type: Air District
Region: South Coast AQMD
Calendar Year: 2021, 2022, 2023
Season: Annual
Vehicle Classification: EMFAC202x Categories
Units: miles/day for CVMT and EVMT, trips/day for Trips, kWh/day for Energy Consumption, tons/day for Emissions, 1000 gallons/day for Fuel Consumption

Region	Calendar Ye	Vehicle Category	Model Year	Speed	Fuel	Population	Total VMT	CVMT	EVMT	Trips	Energy Consum	NOx_RUNEX	NOx_IDLEX	NOx_STREX	NOx_TOTEX
South Coast AQMD	2021	LDA	Aggregate	Aggregate	Gasoline	5646948.6	223981058.1	223981058.1	0	26364886.12	0	14.16495609	0	8.154482154	22.31943824
South Coast AQMD	2021	LDA	Aggregate	Aggregate	Diesel	17991.235	576749.3156	576749.3156	0	76744.61186	0	0.172836381	0	0	0.172836381
South Coast AQMD	2021	LDA	Aggregate	Aggregate	Electricity	171122.06	7367607.368	0	7367607.368	862581.3219	2844504.526	0	0	0	0
South Coast AQMD	2021	LDA	Aggregate	Aggregate	Plug-in Hyb	112080	5328526.508	2829255.728	2499270.78	463450.8013	754854.2658	0.020832207	0	0.056850945	0.077683152
South Coast AQMD	2021	LDT1	Aggregate	Aggregate	Gasoline	532898.54	18828745.22	18828745.22	0	2343703.081	0	4.825254616	0	1.281323155	6.106577771
South Coast AQMD	2021	LDT1	Aggregate	Aggregate	Diesel	252.79469	4927.800918	4927.800918	0	763.445607	0	0.008416176	0	0	0.008416176
South Coast AQMD	2021	LDT1	Aggregate	Aggregate	Electricity	776.13523	23619.37905	0	23619.37905	3489.439787	9119.029725	0	0	0	0
South Coast AQMD	2021	LDT1	Aggregate	Aggregate	Plug-in Hyb	119.3344	6253.178032	3181.281016	3071.897016	493.4477639	927.804456	2.35328E-05	0	6.05368E-05	8.40697E-05
South Coast AQMD	2021	LDT2	Aggregate	Aggregate	Gasoline	2397802.7	96560531	96560531	0	11250255.22	0	11.49512845	0	5.085779716	16.58090817
South Coast AQMD	2021	LDT2	Aggregate	Aggregate	Diesel	6967.749	304110.8768	304110.8768	0	33828.58649	0	0.021717115	0	0	0.021717115
South Coast AQMD	2021	LDT2	Aggregate	Aggregate	Electricity	2683.3703	98959.71624	0	98959.71624	13835.63598	38206.61806	0	0	0	0
South Coast AQMD	2021	LDT2	Aggregate	Aggregate	Plug-in Hyb	8851.3819	450981.6476	232907.3471	218074.3006	36600.46425	65864.93842	0.00172148	0	0.004489946	0.006211426
South Coast AQMD	2022	LDA	Aggregate	Aggregate	Gasoline	5579355.6	222935825.2	222935825.2	0	26017855.8	0	12.53791899	0	7.643503102	20.18142209
South Coast AQMD	2022	LDA	Aggregate	Aggregate	Diesel	17087.062	538837.9195	538837.9195	0	72188.18831	0	0.149686709	0	0	0.149686709
South Coast AQMD	2022	LDA	Aggregate	Aggregate	Electricity	208740.33	9347729.242	0	9347729.242	1049658.126	3608994.997	0	0	0	0
South Coast AQMD	2022	LDA	Aggregate	Aggregate	Plug-in Hyb	126443.36	6018363.977	3116043.817	2902320.16	522843.3047	876587.1914	0.022930811	0	0.064135743	0.087066553
South Coast AQMD	2022	LDT1	Aggregate	Aggregate	Gasoline	522872.64	18702393.24	18702393.24	0	2299442.444	0	4.343418064	0	1.18610112	5.529519184
South Coast AQMD	2022	LDT1	Aggregate	Aggregate	Diesel	227.84549	4412.043504	4412.043504	0	675.7800163	0	0.007505088	0	0	0.007505088
South Coast AQMD	2022	LDT1	Aggregate	Aggregate	Electricity	868.29939	29418.89344	0	29418.89344	3968.369403	11358.12094	0	0	0	0
South Coast AQMD	2022	LDT1	Aggregate	Aggregate	Plug-in Hyb	269.19812	14118.86983	6754.221293	7364.648539	1113.134228	2224.343361	4.99326E-05	0	0.000136558	0.000186491
South Coast AQMD	2022	LDT2	Aggregate	Aggregate	Gasoline	2448794.8	100022729.2	100022729.2	0	11502818.74	0	10.32179123	0	4.722001943	15.04379317
South Coast AQMD	2022	LDT2	Aggregate	Aggregate	Diesel	7501.7639	327725.9919	327725.9919	0	36308.45715	0	0.021377253	0	0	0.021377253
South Coast AQMD	2022	LDT2	Aggregate	Aggregate	Electricity	6809.0895	253338.6597	0	253338.6597	35097.38316	97809.63182	0	0	0	0
South Coast AQMD	2022	LDT2	Aggregate	Aggregate	Plug-in Hyb	13139.98	668295.323	330548.7144	337746.6086	54333.8153	102009.5423	0.002441357	0	0.006665285	0.009106642
South Coast AQMD	2023	LDA	Aggregate	Aggregate	Gasoline	5515653.5	221235120.5	221235120.5	0	25694583.84	0	11.13526165	0	7.189398611	18.32466026
South Coast AQMD	2023	LDA	Aggregate	Aggregate	Diesel	16111.177	499312.1869	499312.1869	0	67515.97114	0	0.127575246	0	0	0.127575246
South Coast AQMD	2023	LDA	Aggregate	Aggregate	Electricity	246800.94	11426023.17	0	11426023.17	1237356.482	4411387.983	0	0	0	0
South Coast AQMD	2023	LDA	Aggregate	Aggregate	Plug-in Hyb	140112.24	6653376.867	3358942.142	3294434.725	579364.1281	995017.4768	0.024711146	0	0.071067909	0.095779055
South Coast AQMD	2023	LDT1	Aggregate	Aggregate	Gasoline	513619.1	18520848.27	18520848.27	0	2259156.896	0	3.880012916	0	1.098432752	4.978445668
South Coast AQMD	2023	LDT1	Aggregate	Aggregate	Diesel	205.23802	3928.730701	3928.730701	0	597.7293583	0	0.006648159	0	0	0.006648159
South Coast AQMD	2023	LDT1	Aggregate	Aggregate	Electricity	1026.0168	38736.20017	0	38736.20017	4782.019468	14955.37034	0	0	0	0
South Coast AQMD	2023	LDT1	Aggregate	Aggregate	Plug-in Hyb	476.83339	24908.50067	11462.29028	13446.21039	1971.706057	4061.156299	8.47125E-05	0	0.000241883	0.000326596
South Coast AQMD	2023	LDT2	Aggregate	Aggregate	Gasoline	2500702.1	103068052	103068052	0	11756611.47	0	9.295863908	0	4.421573296	13.7174372
South Coast AQMD	2023	LDT2	Aggregate	Aggregate	Diesel	7985.4801	348139.877	348139.877	0	38549.84015	0	0.02044442	0	0	0.02044442
South Coast AQMD	2023	LDT2	Aggregate	Aggregate	Electricity	11486.384	424668.3906	0	424668.3906	58989.08661	163957.0486	0	0	0	0
South Coast AQMD	2023	LDT2	Aggregate	Aggregate	Plug-in Hyb	17633.305	890659.9565	425790.6881	464869.2684	72913.7178	140404.3744	0.003143674	0	0.008944401	0.012088075

Composite Emission Factors	Gasoline	Diesel	Plug-In Hybrid	Plug-In Hybrid	Electricity	QA	QA	kW-hr/mi	g/mi
			(gasoline)	(electricity)		conventional fu	electric	Energy Consumption	NOx_RUNEX	NOx_IDLEX	NOx_STREX	NOx_TOTEX
	VMT %	VMT %	VMT %	VMT %	VMT %				
2021/2022 Workers	98.80%	0.25%	0.946%	25.848%	74.15%	100%	100%	*0.011808699*	*0.109926889*
2023 Workers	98.66%	0.25%	1.093%	24.088%	75.91%	100%	100%	*0.015778712*	*0.093141807*

Notes:
EMFAC emissions, fuel use and energy consumption were converted to g/mi, gal/mi, and kW-hr/mi using VMT.

Table A-31. (continued)
EMFAC Output - Worker Vehicle Emission Factors

PM2.5_RUNEX	PM2.5_IDLEX	PM2.5_STREX	PM2.5_TOTEX	PM2.5_PMTW	PM2.5_PMBW	PM2.5_TOTAL	PM10_RUNEX	PM10_IDLEX	PM10_STREX	PM10_TOTEX	PM10_PMTW	PM10_PMBW	PM10_TOTAL	CO2_RUNEX	CO2_IDLEX	CO2_STREX
0.369634581	0	0.063117408	0.432751989	0.493793707	0.720583745	1.647129441	0.402000251	0	0.068640576	0.470640827	1.97517483	2.058810699	4.504626356	74441.76109	0	2141.214753
0.017396748	0	0	0.017396748	0.001271515	0.001859742	0.020528004	0.018183351	0	0	0.018183351	0.005086058	0.005313548	0.028582958	160.4445101	0	0
0	0	0	0	0.016242794	0.012404744	0.028647538	0	0	0	0	0.064971175	0.035442126	0.100413301	0	0	0
0.005085448	0	0.001219843	0.006305291	0.01174739	0.008274435	0.026327116	0.005530889	0	0.00132669	0.006857579	0.04698956	0.023641243	0.077488383	919.6108522	0	34.46379503
0.057446404	0	0.009265665	0.06671207	0.041510278	0.074658579	0.182880926	0.062469647	0	0.010075672	0.07254532	0.166041111	0.213310225	0.451896656	7458.444306	0	241.6891672
0.001371696	0	0	0.001371696	1.08639E-05	2.23658E-05	0.001404926	0.001433718	0	0	0.001433718	4.34558E-05	6.39023E-05	0.001541076	2.365832746	0	0
0	0	0	0	5.20718E-05	4.01925E-05	9.22643E-05	0	0	0	0	0.000208287	0.000114836	0.000323123	0	0	0
3.83754E-06	0	8.81757E-07	4.7193E-06	1.37859E-05	9.7326E-06	2.82378E-05	4.17368E-06	0	9.58991E-07	5.13267E-06	5.51436E-05	2.78074E-05	8.80837E-05	1.03853702	0	0.040225566
0.168008485	0	0.026844426	0.194852911	0.212879531	0.365586501	0.773318943	0.182719915	0	0.029194911	0.211914827	0.851518124	1.044532861	2.107965812	40166.7152	0	1157.405553
0.002477137	0	0	0.002477137	0.00067045	0.001115503	0.00426309	0.002589142	0	0	0.002589142	0.002681799	0.003187151	0.008458092	113.4133347	0	0
0	0	0	0	0.000218169	0.000166131	0.0003843	0	0	0	0	0.000872675	0.00047466	0.001347336	0	0	0
0.000369398	0	8.6236E-05	0.000455634	0.000994244	0.00070147	0.002151349	0.000401754	0	9.37896E-05	0.000495544	0.003976977	0.0020042	0.006476721	75.97363887	0	3.228110449
0.352154002	0	0.05975145	0.411905452	0.491489363	0.717074878	1.620469693	0.382992963	0	0.064981892	0.447974855	1.965957454	2.048785365	4.462717674	72912.97278	0	2072.8788
0.01551779	0	0	0.01551779	0.001187934	0.0017433	0.018449024	0.016219436	0	0	0.016219436	0.004751737	0.004980856	0.025952029	148.9710577	0	0
0	0	0	0	0.020608215	0.015743008	0.036351223	0	0	0	0	0.082432861	0.044980022	0.127412884	0	0	0
0.005198463	0	0.001280092	0.006478555	0.013268221	0.009368907	0.029115684	0.005653803	0	0.001392217	0.00704602	0.053072885	0.026768305	0.086887211	1012.320397	0	38.34018376
0.053190758	0	0.008537619	0.061728378	0.041231719	0.07406586	0.177025957	0.057843935	0	0.009284363	0.067128298	0.164926877	0.211616742	0.443671917	7299.441757	0	232.0328135
0.001223707	0	0	0.001223707	9.72689E-06	2.00153E-05	0.001253449	0.001279037	0	0	0.001279037	3.89076E-05	5.71866E-05	0.001375132	2.117746317	0	0
0	0	0	0	6.48576E-05	4.99312E-05	0.000114789	0	0	0	0	0.00025943	0.000142661	0.000402091	0	0	0
7.34521E-06	0	1.78647E-06	9.13168E-06	3.11268E-05	2.20958E-05	6.23543E-05	7.98859E-06	0	1.94295E-06	9.93153E-06	0.000124507	6.31309E-05	0.00019757	2.203848478	0	0.088592727
0.16518921	0	0.026289558	0.191478768	0.220512371	0.377912266	0.789903406	0.179655044	0	0.028591696	0.208246741	0.882049486	1.079749331	2.170045558	40603.37225	0	1151.324982
0.002502579	0	0	0.002502579	0.000722512	0.001206909	0.004432001	0.002615735	0	0	0.002615735	0.002890049	0.003448312	0.008954095	120.061874	0	0
0	0	0	0	0.000558516	0.000425396	0.000983912	0	0	0	0	0.002234065	0.001215418	0.003449482	0	0	0
0.000456216	0	0.000110826	0.000567043	0.001473339	0.001043572	0.003083954	0.000496177	0	0.000120534	0.000616711	0.005893356	0.002981634	0.009491701	107.7584197	0	4.682038387
0.336338459	0	0.056870101	0.39320856	0.487739951	0.712425883	1.593374395	0.365794844	0	0.061849447	0.427644291	1.950959806	2.035502524	4.414106621	71059.80468	0	2006.129789
0.013470552	0	0	0.013470552	0.001100795	0.00162288	0.016194227	0.01407963	0	0	0.01407963	0.00440318	0.0046368	0.02311961	136.9797247	0	0
0	0	0	0	0.025190069	0.019250109	0.044440179	0	0	0	0	0.100760277	0.055000313	0.155760589	0	0	0
0.005279826	0	0.001339508	0.006619333	0.014668185	0.01038935	0.031676869	0.005742292	0	0.001456837	0.007199129	0.058672741	0.029683859	0.095555728	1090.989161	0	41.85080561
0.049055153	0	0.007870094	0.056925247	0.040831481	0.07334547	0.171102199	0.053348957	0	0.008558897	0.061907854	0.163325924	0.209558487	0.434792265	7109.737507	0	222.8547673
0.001084397	0	0	0.001084397	8.66137E-06	1.78351E-05	0.001110893	0.001133428	0	0	0.001133428	3.46455E-05	5.09574E-05	0.001219031	1.884121023	0	0
0	0	0	0	8.53987E-05	6.55857E-05	0.000150984	0	0	0	0	0.000341595	0.000187388	0.000528982	0	0	0
1.19711E-05	0	3.04186E-06	1.5013E-05	5.49138E-05	3.9137E-05	0.000109064	1.30197E-05	0	3.3083E-06	1.6328E-05	0.000219655	0.00011182	0.000347803	3.739162438	0	0.153412119
0.16275381	0	0.025920739	0.188674549	0.227226159	0.389378889	0.805279596	0.177007969	0	0.028190871	0.20519884	0.908904636	1.112511111	2.226614587	40792.00793	0	1144.597962
0.00238169	0	0	0.00238169	0.000767517	0.001288501	0.004437708	0.00248938	0	0	0.00248938	0.003070068	0.003681431	0.009240879	125.0532485	0	0
0	0	0	0	0.000936234	0.000713542	0.001649775	0	0	0	0	0.003744934	0.002038691	0.005783625	0	0	0
0.00054228	0	0.000137101	0.00067938	0.001963569	0.001396006	0.004038956	0.000589779	0	0.00014911	0.000738888	0.007854276	0.003988589	0.012581754	138.7662283	0	6.149213618
			g/mi	g/mi	g/mi					g/mi	g/mi	g/mi				
PM2.5_RUNEX	PM2.5_IDLEX	PM2.5_STREX	PM2.5_TOTEX	PM2.5_PMTW	PM2.5_PMBW	PM2.5_TOTAL	PM10_RUNEX	PM10_IDLEX	PM10_STREX	PM10_TOTEX	PM10_PMTW	PM10_PMBW	PM10_TOTAL	CO2_RUNEX	CO2_IDLEX	CO2_STREX
			0.001800297	*0.002*	*0.003035981*					*0.001955735*	*0.008*	*0.008674231*				
			0.00165646	*0.002*	*0.003022668*					*0.001799731*	*0.008*	*0.008636195*				

Table A-31. (continued)
EMFAC Output - Worker Vehicle Emission Factors

CO2_TOTEX	CH4_RUNEX	CH4_IDLEX	CH4_STREX	CH4_TOTEX	N2O_RUNEX	N2O_IDLEX	N2O_STREX	N2O_TOTEX	ROG_RUNEX	ROG_IDLEX	ROG_STREX	ROG_TOTEX	ROG_DIURN	ROG_HOTSOA	ROG_RUNLOS	ROG_TOTAL	TOG_RUNEX
76582.97584	0.897680316	0	2.305969914	3.203650231	1.397269666	0	1.00202167	2.399291336	3.605839932	0	10.80516087	14.41100081	9.959170946	2.920450564	7.065892998	34.35651531	5.258284512
160.4445101	0.001302491	0	0	0.001302491	0.025278098	0	0	0.025278098	0.028041855	0	0	0.028041855	0	0	0	0.028041855	0.031923788
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
954.0746473	0.003215773	0	0.020777574	0.023993347	0.003899751	0	0.010632209	0.01453196	0.0099831	0	0.082895401	0.092878501	0.063275994	0.020546355	0.017766719	0.194467569	0.014567316
7700.133473	0.262633181	0	0.353443563	0.616076744	0.317055808	0	0.113189476	0.430245284	1.199367577	0	1.896706822	3.096074399	2.252880462	0.598621501	1.744985994	7.692562357	1.748096932
2.365832746	8.23405E-05	0	0	8.23405E-05	0.000372738	0	0	0.000372738	0.001772743	0	0	0.001772743	0	0	0	0.001772743	0.00201815
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1.078762585	3.66721E-06	0	2.22699E-05	2.59371E-05	4.45466E-06	0	1.14601E-05	1.59148E-05	1.13161E-05	0	8.82728E-05	9.95889E-05	4.81288E-05	1.48964E-05	1.41903E-05	0.000176804	1.65124E-05
41324.12075	0.500646256	0	1.175383961	1.676030217	0.864344491	0	0.512552507	1.376896998	2.057331589	0	5.592882406	7.650213995	4.217610602	1.175358037	3.011741641	16.05492427	3.000873495
113.4133347	0.000310738	0	0	0.000310738	0.017868317	0	0	0.017868317	0.006690003	0	0	0.006690003	0	0	0	0.006690003	0.007616124
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
79.20174932	0.000267726	0	0.001649137	0.001916863	0.000324976	0	0.000847614	0.001172589	0.000827345	0	0.006546549	0.007373894	0.003819609	0.001149394	0.001103587	0.013446483	0.00120726
74985.85158	0.801077465	0	2.156028389	2.957105854	1.294606088	0	0.966214419	2.260820507	3.155737319	0	9.95460707	13.11034439	9.631898365	2.779156549	6.827304289	32.34870359	4.602828802
148.9710577	0.001169298	0	0	0.001169298	0.023470451	0	0	0.023470451	0.025174297	0	0	0.025174297	0	0	0	0.025174297	0.028659264
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1050.66058	0.003528153	0	0.023374437	0.02690259	0.00426969	0	0.011931691	0.016201382	0.010984275	0	0.093516384	0.104500659	0.068741901	0.023135574	0.020064655	0.216442788	0.016028228
7531.474571	0.236473005	0	0.326147983	0.562620987	0.290331904	0	0.107824852	0.398156756	1.072466519	0	1.731411437	2.803877956	2.149436476	0.560134891	1.642808617	7.15625794	1.563702418
2.117746317	7.3366E-05	0	0	7.3366E-05	0.000333652	0	0	0.000333652	0.001579527	0	0	0.001579527	0	0	0	0.001579527	0.001798187
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2.292441205	7.72323E-06	0	4.98787E-05	5.76019E-05	9.32805E-06	0	2.5508E-05	3.4836E-05	2.40004E-05	0	0.000199121	0.000223121	9.55507E-05	3.14254E-05	2.84763E-05	0.000378573	3.50213E-05
41754.69724	0.46548023	0	1.125668182	1.591148412	0.808917346	0	0.498834573	1.307751919	1.884201522	0	5.274764164	7.158965686	4.172530498	1.142678683	2.970913226	15.44508809	2.748648434
120.061874	0.000324385	0	0	0.000324385	0.018915797	0	0	0.018915797	0.006983813	0	0	0.006983813	0	0	0	0.006983813	0.007950607
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
112.4404581	0.000377493	0	0.002435228	0.002812721	0.000456373	0	0.001245873	0.001702245	0.001172686	0	0.009718174	0.01089086	0.005173934	0.001631462	0.001518317	0.019214574	0.001711181
73065.93447	0.71605062	0	2.018203453	2.734254073	1.20346926	0	0.931947377	2.135416637	2.765385043	0	9.193156048	11.95854109	9.328020623	2.677405143	6.608000159	30.57196702	4.034050849
136.9797247	0.001023726	0	0	0.001023726	0.021581211	0	0	0.021581211	0.022040214	0	0	0.022040214	0	0	0	0.022040214	0.025091318
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1132.839966	0.003788304	0	0.025817009	0.029605314	0.00457286	0	0.013140583	0.017713442	0.01183284	0	0.103622715	0.115455555	0.074954056	0.026223204	0.022786599	0.239419414	0.017266452
7332.592274	0.211122736	0	0.300732883	0.511855618	0.264413831	0	0.102749284	0.367163115	0.950030827	0	1.579200612	2.529231438	2.025874581	0.526243427	1.529428795	6.610778241	1.385885568
1.884121023	6.50764E-05	0	0	6.50764E-05	0.000296844	0	0	0.000296844	0.001401058	0	0	0.001401058	0	0	0	0.001401058	0.001595011
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3.892574557	1.3032E-05	0	8.79055E-05	0.000100937	1.5675E-05	0	4.47546E-05	6.04296E-05	4.07028E-05	0	0.000352692	0.000393394	0.000160541	5.44182E-05	4.74432E-05	0.000655797	5.93934E-05
41936.60589	0.432815137	0	1.080064538	1.512879675	0.76070011	0	0.48757227	1.24827238	1.724799495	0	4.990390225	6.715189721	4.110407269	1.115778806	2.917663318	14.85903911	2.516555392
125.0532485	0.00032654	0	0	0.00032654	0.01970219	0	0	0.01970219	0.007030209	0	0	0.007030209	0	0	0	0.007030209	0.008003426
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
144.9154419	0.000483565	0	0.003252201	0.003735766	0.000582343	0	0.00165674	0.002239083	0.001509449	0	0.013040981	0.01455043	0.006599097	0.002135273	0.001948416	0.025233217	0.002202585

g/mi				g/mi				g/mi				g/mi					
CO2_TOTEX	CH4_RUNEX	CH4_IDLEX	CH4_STREX	CH4_TOTEX	N2O_RUNEX	N2O_IDLEX	N2O_STREX	N2O_TOTEX	ROG_RUNEX	ROG_IDLEX	ROG_STREX	ROG_TOTEX	ROG_DIURN	ROG_HOTSOAK	ROG_RUNLOSS	ROG_TOTAL	TOG_RUNEX
321.701739				*0.01358189*				*0.010560624*				*0.061782552*					
309.480105				*0.01197604*				*0.009524292*				*0.05337136*					

Table A-31. (continued)
EMFAC Output - Worker Vehicle Emission Factors

TOG_IDLEX	TOG_STREX	TOG_TOTEX	TOG_DIURN	TOG_HOTSOAK	TOG_RUNLOSS	TOG_TOTAL	CO_RUNEX	CO_IDLEX	CO_STREX	CO_TOTEX	SOx_RUNEX	SOx_IDLEX	SOx_STREX	SOx_TOTEX	NH3_RUNEX	Fuel Consumption
0	11.83020622	17.08849073	9.959170946	2.920450564	7.065892998	37.03400524	237.8112078	0	102.3710307	340.1822385	0.735932596	0	0.021168088	0.757100684	7.980000755	8075.579114
0	0	0.031923788	0	0	0	0.031923788	0.27286274	0	0	0.27286274	0.001520293	0	0	0.001520293	0.001970847	14.33244453
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0.09076003	0.105327347	0.063275994	0.020546355	0.017766719	0.206916414	1.499352565	0	0.630525306	2.12987787	0.00909129	0	0.00034071	0.009431999	0.116764395	100.6059795
0	2.076636739	3.824733671	2.252880462	0.598621501	1.744985994	8.421221628	51.32847679	0	18.09719103	69.42566781	0.073734315	0	0.002389343	0.076123659	0.771527139	811.9694536
0	0	0.00201815	0	0	0	0.00201815	0.010044687	0	0	0.010044687	2.24175E-05	0	0	2.24175E-05	1.68391E-05	0.211338902
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	9.66476E-05	0.00011316	4.81288E-05	1.48964E-05	1.41903E-05	0.000190376	0.001697673	0	0.000671419	0.002369093	1.0267E-05	0	3.97671E-07	1.06647E-05	0.000147284	0.113754167
0	6.123491436	9.124364932	4.217610602	1.175358037	3.011741641	17.52907521	125.1996797	0	51.20679302	176.4064727	0.397088873	0	0.011442132	0.408531005	3.676489484	4357.5769
0	0	0.007616124	0	0	0	0.007616124	0.056340603	0	0	0.056340603	0.001074649	0	0	0.001074649	0.001039197	10.13116826
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0.007167648	0.008374907	0.003819609	0.001149394	0.001103587	0.014447496	0.124134486	0	0.049795223	0.17392971	0.000751077	0	3.19132E-05	0.00078299	0.010746985	8.351725506
0	10.89899028	15.50181909	9.631898365	2.779156549	6.827304289	34.74017829	220.8279519	0	95.09730068	315.9252526	0.720818967	0	0.020492517	0.741311484	8.149004928	7907.164357
0	0	0.028659264	0	0	0	0.028659264	0.251078576	0	0	0.251078576	0.001411576	0	0	0.001411576	0.001841298	13.30752557
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0.102388669	0.118416897	0.068741901	0.023135574	0.020064655	0.230359027	1.65005193	0	0.711312489	2.361364419	0.010007818	0	0.000379032	0.010386849	0.131087493	110.7908454
0	1.895666218	3.459368636	2.149436476	0.560134891	1.642808617	7.811748621	46.71082448	0	16.48501768	63.19584216	0.072162413	0	0.002293881	0.074456294	0.769554604	794.1845831
0	0	0.001798187	0	0	0	0.001798187	0.008957653	0	0	0.008957653	2.00667E-05	0	0	2.00667E-05	1.50767E-05	0.18917744
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0.000218012	0.000253033	9.55507E-05	3.14254E-05	2.84763E-05	0.000408486	0.003602052	0	0.001514562	0.005116615	2.17873E-05	0	8.75829E-07	2.26631E-05	0.000312701	0.241735061
0	5.775195752	8.523844186	4.172530498	1.142678683	2.970913226	16.80996659	119.1839833	0	48.85832007	168.0423033	0.401405672	0	0.01138202	0.412787692	3.903024415	4402.980652
0	0	0.007950607	0	0	0	0.007950607	0.060018901	0	0	0.060018901	0.001137647	0	0	0.001137647	0.001119893	10.72507964
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0.010640177	0.012351358	0.005173934	0.001631462	0.001518317	0.020675072	0.176036452	0	0.073920489	0.24995694	0.001065302	0	4.62867E-05	0.001111588	0.015269251	11.85670581
0	10.06531776	14.09936861	9.328020623	2.677405143	6.608000159	32.71279453	205.4258317	0	88.61965769	294.0454894	0.702498514	0	0.019832635	0.722331149	8.298326681	7704.711496
0	0	0.025091318	0	0	0	0.025091318	0.228129967	0	0	0.228129967	0.001297953	0	0	0.001297953	0.001706232	12.23634455
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0.11345383	0.130720283	0.074954056	0.026223204	0.022786599	0.254684141	1.778114628	0	0.788185908	2.566300536	0.010785539	0	0.000413738	0.011199276	0.143438861	119.456559
0	1.729022043	3.114907611	2.025874581	0.526243427	1.529428795	7.196454414	42.24128296	0	15.01645386	57.25773682	0.070286994	0	0.002203146	0.07249014	0.766052002	773.2126934
0	0	0.001595011	0	0	0	0.001595011	0.007942947	0	0	0.007942947	1.7853E-05	0	0	1.7853E-05	1.34251E-05	0.168307785
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0.000386153	0.000445546	0.000160541	5.44182E-05	4.74432E-05	0.000707949	0.006111012	0	0.002682685	0.008793697	3.69654E-05	0	1.51663E-06	3.84821E-05	0.00053067	0.410467123
0	5.463846553	7.980401945	4.110407269	1.115778805	2.917663318	16.12425134	113.5106345	0	46.75173792	160.2623724	0.403270528	0	0.011315516	0.414586044	4.115204767	4422.162693
0	0	0.008003426	0	0	0	0.008003426	0.062732042	0	0	0.062732042	0.001184943	0	0	0.001184943	0.001189651	11.17095716
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0.014278233	0.016480817	0.006599097	0.002135273	0.001948416	0.027163604	0.226671336	0	0.0991961	0.325867436	0.001371845	0	6.07912E-05	0.001432637	0.019680591	15.28115228
										g/mi				g/mi		gal/mi
TOG_IDLEX	TOG_STREX	TOG_TOTEX	TOG_DIURN	TOG_HOTSOAK	TOG_RUNLOSS	TOG_TOTAL	CO_RUNEX	CO_IDLEX	CO_STREX	CO_TOTEX	SOx_RUNEX	SOx_IDLEX	SOx_STREX	SOx_TOTEX	NH3_RUNEX	Fuel Consumption
										1.45012955				*0.00318006*		*0.037381373*
										1.28599243				*0.00305926*		*0.035961432*

Table A-32.
EMFAC Output - Truck Idling Emission Factors - PL EMFAC (IDLEX g/vh-hr)

calendar_year	season_mo	sub_area	vehicle_class	fuel	temperatu	relative_hu	process	speed_time	pollutant	emission_rate
2021	Annual	Los Angeles (SC)	T7 POLA Class 8	Dsl			IDLEX		HC	1.876894277
2021	Annual	Los Angeles (SC)	T7 POLA Class 8	Dsl			IDLEX		CO	25.33948284
2021	Annual	Los Angeles (SC)	T7 POLA Class 8	Dsl			IDLEX		NOx	40.46756284
2021	Annual	Los Angeles (SC)	T7 POLA Class 8	Dsl			IDLEX		SOx	0.063709431
2021	Annual	Los Angeles (SC)	T7 POLA Class 8	Dsl			IDLEX		PM	0.015277753
2021	Annual	Los Angeles (SC)	T7 POLA Class 8	Dsl			IDLEX		TOG	2.705918479
2021	Annual	Los Angeles (SC)	T7 POLA Class 8	Dsl			IDLEX		ROG	2.376898912
2021	Annual	Los Angeles (SC)	T7 POLA Class 8	Dsl			IDLEX		CO2	6677.810152
2021	Annual	Los Angeles (SC)	T7 POLA Class 8	Dsl			IDLEX		CH4	0.110400798
2021	Annual	Los Angeles (SC)	T7 POLA Class 8	Dsl			IDLEX		PM10	0.015186086
2021	Annual	Los Angeles (SC)	T7 POLA Class 8	Dsl			IDLEX		PM2_5	0.014529143
2021	Annual	Los Angeles (SC)	T7 POLA Class 8	NG			IDLEX		HC	44.45709269
2021	Annual	Los Angeles (SC)	T7 POLA Class 8	NG			IDLEX		CO	63.91164018
2021	Annual	Los Angeles (SC)	T7 POLA Class 8	NG			IDLEX		NOx	15.24120513
2021	Annual	Los Angeles (SC)	T7 POLA Class 8	NG			IDLEX		PM	0.04210087
2021	Annual	Los Angeles (SC)	T7 POLA Class 8	NG			IDLEX		TOG	44.36817851
2021	Annual	Los Angeles (SC)	T7 POLA Class 8	NG			IDLEX		ROG	0.621154499
2021	Annual	Los Angeles (SC)	T7 POLA Class 8	NG			IDLEX		CO2	10223.93625
2021	Annual	Los Angeles (SC)	T7 POLA Class 8	NG			IDLEX		CH4	43.47377738
2021	Annual	Los Angeles (SC)	T7 POLA Class 8	NG			IDLEX		PM10	0.037638178
2021	Annual	Los Angeles (SC)	T7 POLA Class 8	NG			IDLEX		PM2_5	0.034606915
2022	Annual	Los Angeles (SC)	T7 POLA Class 8	Dsl			IDLEX		HC	1.875172215
2022	Annual	Los Angeles (SC)	T7 POLA Class 8	Dsl			IDLEX		CO	26.64971729
2022	Annual	Los Angeles (SC)	T7 POLA Class 8	Dsl			IDLEX		NOx	38.63446838
2022	Annual	Los Angeles (SC)	T7 POLA Class 8	Dsl			IDLEX		SOx	0.062547608
2022	Annual	Los Angeles (SC)	T7 POLA Class 8	Dsl			IDLEX		PM	0.014383871
2022	Annual	Los Angeles (SC)	T7 POLA Class 8	Dsl			IDLEX		TOG	2.703435782
2022	Annual	Los Angeles (SC)	T7 POLA Class 8	Dsl			IDLEX		ROG	2.374718093
2022	Annual	Los Angeles (SC)	T7 POLA Class 8	Dsl			IDLEX		CO2	6556.031743
2022	Annual	Los Angeles (SC)	T7 POLA Class 8	Dsl			IDLEX		CH4	0.110299505
2022	Annual	Los Angeles (SC)	T7 POLA Class 8	Dsl			IDLEX		PM10	0.014297568
2022	Annual	Los Angeles (SC)	T7 POLA Class 8	Dsl			IDLEX		PM2_5	0.013679061
2022	Annual	Los Angeles (SC)	T7 POLA Class 8	NG			IDLEX		HC	44.30549734
2022	Annual	Los Angeles (SC)	T7 POLA Class 8	NG			IDLEX		CO	64.55735976
2022	Annual	Los Angeles (SC)	T7 POLA Class 8	NG			IDLEX		NOx	15.22919846
2022	Annual	Los Angeles (SC)	T7 POLA Class 8	NG			IDLEX		PM	0.042449277
2022	Annual	Los Angeles (SC)	T7 POLA Class 8	NG			IDLEX		TOG	44.21688635
2022	Annual	Los Angeles (SC)	T7 POLA Class 8	NG			IDLEX		ROG	0.619036409
2022	Annual	Los Angeles (SC)	T7 POLA Class 8	NG			IDLEX		CO2	10178.44847
2022	Annual	Los Angeles (SC)	T7 POLA Class 8	NG			IDLEX		CH4	43.32553506
2022	Annual	Los Angeles (SC)	T7 POLA Class 8	NG			IDLEX		PM10	0.037949654
2022	Annual	Los Angeles (SC)	T7 POLA Class 8	NG			IDLEX		PM2_5	0.034893306
2023	Annual	Los Angeles (SC)	T7 POLA Class 8	Dsl			IDLEX		HC	1.869907406
2023	Annual	Los Angeles (SC)	T7 POLA Class 8	Dsl			IDLEX		CO	34.98989074
2023	Annual	Los Angeles (SC)	T7 POLA Class 8	Dsl			IDLEX		NOx	27.98310604
2023	Annual	Los Angeles (SC)	T7 POLA Class 8	Dsl			IDLEX		SOx	0.055802958
2023	Annual	Los Angeles (SC)	T7 POLA Class 8	Dsl			IDLEX		PM	0.010138841
2023	Annual	Los Angeles (SC)	T7 POLA Class 8	Dsl			IDLEX		TOG	2.695845508
2023	Annual	Los Angeles (SC)	T7 POLA Class 8	Dsl			IDLEX		ROG	2.368050739
2023	Annual	Los Angeles (SC)	T7 POLA Class 8	Dsl			IDLEX		CO2	5849.080035
2023	Annual	Los Angeles (SC)	T7 POLA Class 8	Dsl			IDLEX		CH4	0.109989824
2023	Annual	Los Angeles (SC)	T7 POLA Class 8	Dsl			IDLEX		PM10	0.010078007
2023	Annual	Los Angeles (SC)	T7 POLA Class 8	Dsl			IDLEX		PM2_5	0.009642037
2023	Annual	Los Angeles (SC)	T7 POLA Class 8	NG			IDLEX		HC	45.90733564
2023	Annual	Los Angeles (SC)	T7 POLA Class 8	NG			IDLEX		CO	57.73433816
2023	Annual	Los Angeles (SC)	T7 POLA Class 8	NG			IDLEX		NOx	15.35606738
2023	Annual	Los Angeles (SC)	T7 POLA Class 8	NG			IDLEX		PM	0.038767821
2023	Annual	Los Angeles (SC)	T7 POLA Class 8	NG			IDLEX		TOG	45.81552097
2023	Annual	Los Angeles (SC)	T7 POLA Class 8	NG			IDLEX		ROG	0.641417294
2023	Annual	Los Angeles (SC)	T7 POLA Class 8	NG			IDLEX		CO2	9941.930803
2023	Annual	Los Angeles (SC)	T7 POLA Class 8	NG			IDLEX		CH4	44.89194342
2023	Annual	Los Angeles (SC)	T7 POLA Class 8	NG			IDLEX		PM10	0.034658432
2023	Annual	Los Angeles (SC)	T7 POLA Class 8	NG			IDLEX		PM2_5	0.031867149

Source:
EMFAC PL 2021

Table A-33.

Composite Truck Idling Emission Factors

		EMFAC2021 (mi/day)		EMFAC PL IDLEX g/vh-hr									
Year	Fuel	CVMT	EVMT	**PM_{10}**	**$PM_{2.5}$**	**DPM**	**NO_x**	**SO_x**	**CO**	**VOC**	**CO2**	**CH4**	**N2O**
2021	dsl	1,649,610.9090	0	0.015186086	0.014529143	0.015186086	40.46756284	0.063709431	25.33948284	1.876894277	6677.810152	0.110400798	0
2021	ng	75,016.4461	0	0.037638178	0.034606915	0	15.24120513	0	63.91164018	44.45709269	10223.93625	43.47377738	0
2022	dsl	1,727,958.3510	0	0.014297568	0.013679061	0.014297568	38.63446838	0.062547608	26.64971729	1.875172215	6556.031743	0.110299505	0
2022	ng	72,828.5485	0	0.037949654	0.034893306	0	15.22919846	0	64.55735976	44.30549734	10178.44847	43.32553506	0
2023	dsl	1,855,207.2457	0	0.010078007	0.009642037	0.010078007	27.98310604	0.055802958	34.98989074	1.869907406	5849.080035	0.109989824	0
2023	elec	0.0000	262.5514609	0	0	0	0	0	0	0	0	0	0
2023	ng	22,462.8127	0	0.034658432	0.031867149	0	15.35606738	0	57.73433816	45.90733564	9941.930803	44.89194342	0
Composite Idling Emission Factors				*g/vh-hr*									
2021/2022				*0.015698591*	*0.014960397*	*0.014113727*	*38.51092015*	*0.060468194*	*27.61262216*	*3.658600661*	*6765.895167*	*1.92581493*	*0*
2023				*0.010370616*	*0.009906534*	*0.009956051*	*27.82815596*	*0.055127671*	*35.25705561*	*2.39639784*	*5897.218746*	*0.64563192*	*0*

Notes:

IDLEX is from EMFAC PL 2021

CVMT and EVMT are from EMFAC 2021

Composite idling emission factors calculated by weighting IDLEX emission factors by the VMT for each fuel type.

Table A-34.
EMFAC Output - Truck Emission Factors - Offsite Transit

Source: EMFAC2021 (v1.0.2) Emissions Inventory
Region Type: Air District
Region: South Coast AQMD
Calendar Year: 2021, 2022, 2023
Season: Annual
Vehicle Classification: EMFAC202x Categories
Units: miles/day for CVMT and EVMT, trips/day for Trips, kWh/day for Energy Consumption, tons/day for Emissions, 1000 gallons/day for Fuel Consumption

Region	Calendar Year	Vehicle Category	Model Year	Speed	Fuel	Population	Total VMT	CVMT	EVMT	Trips	Energy Consumption	NOx_RUNEX	NOx_IDLEX	NOx_STREX	NOx_TOTEX	PM2.5_RUNEX	PM2.5_IDLEX	PM2.5_STREX	PM2.5_TOTEX	PM2.5_PMTW	PM2.5_PMBW	PM2.5_TOTAL
South Coast AQMD	2021	T7 POLA Class 8	Aggregate	Aggregate	Diesel	12642.546	1649610.909	1649610.909	0	206832.0578	0	7.523674249	0.816328206	0.307863895	8.64786635	0.053661372	0.000297629	0	0.053959001	0.016365463	0.055051228	0.125375693
South Coast AQMD	2021	T7 POLA Class 8	Aggregate	Aggregate	Natural Ga	574.70264	75016.44613	75016.44613	0	9402.135182	0	0.043745901	0.014129102	0	0.057875003	8.9113E-05	2.71074E-05	0	0.00011622	0.000744223	0.002492527	0.00335297
South Coast AQMD	2022	T7 POLA Class 8	Aggregate	Aggregate	Diesel	13293.312	1727958.351	1727958.351	0	217478.5788	0	7.275169525	0.817835355	0.353022263	8.446027143	0.055417851	0.000293544	0	0.055711395	0.017142732	0.056903054	0.129757181
South Coast AQMD	2022	T7 POLA Class 8	Aggregate	Aggregate	Natural Ga	560.22981	72828.54851	72828.54851	0	9165.359751	0	0.041715476	0.013749448	0	0.055464924	8.81757E-05	2.69934E-05	0	0.000115169	0.000722518	0.002405084	0.003242771
South Coast AQMD	2023	T7 POLA Class 8	Aggregate	Aggregate	Diesel	14182.131	1855207.246	1855207.246	0	232019.6614	0	3.26893422	0.63153335	0.58232726	4.48279483	0.048463657	0.000217605	0	0.048681262	0.018405143	0.056503342	0.123589748
South Coast AQMD	2023	T7 POLA Class 8	Aggregate	Aggregate	Electricity	4.7994461	262.5514609	0	262.5514609	78.51893816	466.0550114	0	0	0	0	0	0	0	0	2.60472E-06	4.0192E-06	6.62392E-06
South Coast AQMD	2023	T7 POLA Class 8	Aggregate	Aggregate	Natural Ga	173.39027	22462.81269	22462.81269	0	2836.664805	0	0.009892802	0.004161128	0	0.01405393	3.37165E-05	1.06038E-05	0	4.43204E-05	0.000222849	0.000684924	0.000952093

Composite Emission Factors	Diesel fracti	Natural Gas % of Conv Fuel VMT %	Diesel % of Conv Fuel VMT %	QA	Electricity % of Total VMT	kWh/mi	g/mi	g/mi	g/mi	g/mi
2021/2022 Trucks	99.831%	4.19%	95.81%	*100.00%*	0.00%	*0.000000000*	*4.000199499*	*0.028114665*	*0.009*	*0.030069162*
2023+ Trucks	99.928%	1.20%	98.80%	*100.00%*	0.01%	*0.000248175*	*1.86523213*	*0.023427932*	*0.009*	*0.027628237*

Notes:

EMFAC emissions, fuel use and energy consumption were converted to g/mi, gal/mi, and kW-hr/mi using VMT.

IDLEX reflects emissions associated with extended idling events (i.e., loading/unloading). Since EMFAC Emissions and Emission Rate outputs IDLEX in ton/day or in g/vehcle-day, respectively, but does not identify hr/day, the IDLEX output was not used. Instead, EMFAC PL was used to generate IDLEX in g/vehicle-hr and used in the analysis. To avoid double counting, IDLEX emissions were subtracted from Total Exhaust emissions and quantified separately using EMFAC PL.

Table A-34. (continued)
EMFAC Output - Truck Emission Factors - Offsite Transit

PM10_RUNEX	PM10_IDLEX	PM10_STREX	PM10_TOTEX	PM10_PMTW	PM10_PMBW	PM10_TOTAL	CO2_RUNEX	CO2_IDLEX	CO2_STREX	CO2_TOTEX	CH4_RUNEX	CH4_IDLEX	CH4_STREX	CH4_TOTEX	N2O_RUNEX	N2O_IDLEX	N2O_STREX	N2O_TOTEX	ROG_RUNEX	ROG_IDLEX	ROG_STREX	ROG_TOTEX	ROG_DIURN
0.056087701	0.000311087	0	0.056398788	0.065461851	0.157289223	0.279149863	2979.279662	134.85567	0	3114.135335	0.006757862	0.00222277	0	0.008980632	0.469386724	0.021246566	0	0.49063329	0.145494915	0.047855622	0	0.193350537	0
9.69186E-05	2.94818E-05	0	0.0001264	0.002976893	0.007121504	0.010224798	111.6006638	10.943469	0	122.5441326	0.077362541	0.042109521	0	0.119472063	0.022750525	0.002230898	0	0.024981423	0.001105358	0.000601662	0	0.00170702	0
0.0579236	0.000306816	0	0.058230417	0.068570929	0.162580154	0.2893815	3109.828554	139.20804	0	3249.036598	0.006326788	0.002334725	0	0.008661513	0.489954755	0.021932284	0	0.511887039	0.13621402	0.050265979	0	0.18648	0
9.58991E-05	2.93577E-05	0	0.000125257	0.00289007	0.006871669	0.009886997	107.7976711	10.649454	0	118.4471254	0.075198901	0.040754745	0	0.115953647	0.02197526	0.002170961	0	0.024146221	0.001074444	0.000582305	0	0.001656749	0
0.050654969	0.000227444	0	0.050882413	0.073620574	0.161438119	0.285941106	3332.718341	133.05292	0	3465.771258	0.001072235	0.002482292	0	0.003554527	0.525071132	0.020962541	0	0.546033673	0.023084922	0.053443067	0	0.076527989	0
0	0	0	0	1.04189E-05	1.14834E-05	2.19023E-05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3.66698E-05	1.15326E-05	0	4.82024E-05	0.000891396	0.001956926	0.002896525	31.43049334	3.2624775	0	34.69297087	0.023547903	0.011449181	0	0.034997084	0.006407312	0.000665077	0	0.007072389	0.000336453	0.000163586	0	0.000500039	0
			g/mi	g/mi	g/mi					g/mi				g/mi				g/mi				g/mi	
			0.029387819	*0.036*	*0.08591189*					*1623.3499*				*0.04262523*				*0.25837375*				*0.073052275*	
			0.024487929	*0.036*	*0.07893782*					*1625.14058*				*0.01189341*				*0.256744641*				*0.011314311*	

Table A-34. (continued)
EMFAC Output - Truck Emission Factors - Offsite Transit

ROG_HOTSOAK	ROG_RUNLOS	ROG_TOTAL	TOG_RUNEX	TOG_IDLEX	TOG_STREX	TOG_TOTEX	TOG_DIURN	TOG_HOTSOAK	TOG_RUNLOS	TOG_TOTAL	CO_RUNEX	CO_IDLEX	CO_STREX	CO_TOTEX	SOx_RUNEX	SOx_IDLEX	SOx_STREX	SOx_TOTEX	NH3_RUNEX	Fuel Consumption	DPM without IDLEX	DPM IDLEX
														g/mi				g/mi		DGE gal/mi	g/mi	g/mi
0	0	0.193350537	0.165634885	0.054479983	0	0.220114868	0	0	0	0.220114868	0.465628732	0.515309515	0	0.980938248	0.028211997	0.001277003	0	0.029488999	0.276107633	278.1844759	0.056088	0.000311
0	0	0.00170702	0.078954148	0.042975855	0	0.121930003	0	0	0	0.121930003	0.800000787	0.048208973	0	0.84820976	0	0	0	0	0.087652941	14.16423269	0	0
0	0	0.18648	0.155069293	0.057223991	0	0.212293284	0	0	0	0.212293284	0.448383591	0.569808739	0	1.01819233	0.029448217	0.001318217	0	0.030766434	0.307713636	290.2351523	0.057924	0.000307
0	0	0.001656749	0.076745994	0.041593207	0	0.118339201	0	0	0	0.118339201	0.764438356	0.048276951	0	0.812715307	0	0	0	0	0.085096492	13.69068114	0	0
0	0	0.076527989	0.026280426	0.060840864	0	0.08712129	0	0	0	0.08712129	0.175355343	0.789665125	0	0.965020468	0.03155885	0.001259932	0	0.032818781	0.449903376	309.5959736	0.050655	0.000227
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0.000500039	0.024032362	0.011684729	0	0.035717092	0	0	0	0.035717092	0.187628533	0.020013363	0	0.207641896	0	0	0	0	0.026246666	4.009978296	0	0
														0.63777281				*0.01483754*		*0.169136022*	*0.02934*	*0.00016*
														0.17534891				*0.01524533*		*0.166995317*	*0.02447*	*0.00011*

Table A-35.
EMFAC Output - Truck Emission Factors - Onsite Transit

Source: EMFAC2021 (v1.0.2) Emissions Inventory
Region Type: Air District
Region: South Coast AQMD
Calendar Year: 2021, 2022, 2023
Season: Annual
Vehicle Classification: EMFAC202x Categories
Units: miles/day for CVMT and EVMT, tons/day for Emissions, 1000 gallons/day for Fuel Consumption, mph for Speed, kWh/day for Energy Consumption

Region	Calendar Ye	Vehicle Category	Model Year	Speed	Fuel	Total VMT	CVMT	EVMT	NOx_RUNEX	PM2.5_RUNEX	PM10_RUNEX
South Coast AQMD	2021	T7 POLA Class 8	Aggregate	10	Diesel	2234.1314	2234.131444	0	0.026480351	7.46732E-05	7.80496E-05
South Coast AQMD	2021	T7 POLA Class 8	Aggregate	10	Natural Ga	101.82309	101.8230905	0	0.000398136	5.31022E-07	5.77535E-07
South Coast AQMD	2022	T7 POLA Class 8	Aggregate	10	Diesel	2340.2691	2340.269101	0	0.026871965	7.01977E-05	7.33718E-05
South Coast AQMD	2022	T7 POLA Class 8	Aggregate	10	Natural Ga	98.841187	98.84118657	0	0.000377731	5.25504E-07	5.71534E-07
South Coast AQMD	2023	T7 POLA Class 8	Aggregate	10	Diesel	2449.0808	2449.080798	0	0.020415153	2.21565E-05	2.31583E-05
South Coast AQMD	2023	T7 POLA Class 8	Aggregate	10	Electricity	0.3579741	0	0.357974146	0	0	0
South Coast AQMD	2023	T7 POLA Class 8	Aggregate	10	Natural Ga	29.81182	29.81182	0	8.0337E-05	1.9705E-07	2.1431E-07

Composite Emission Factors		g/mi	g/mi	g/mi
	Diesel fraction of PM10 Exhaust	NOx_RUNEX	PM2.5_RUNEX	PM10_RUNEX
2021/2022 Trucks	99.247%	*10.28347554*	*0.027723844*	*0.028985899*
2023 Trucks	99.083%	*7.499522725*	*0.008179417*	*0.008552309*

Notes:

EMFAC emissions, fuel use and energy consumption were converted to g/mi, gal/mi, and kW-hr/mi using VMT.

IDLEX reflects emissions associated with extended idling events (i.e., loading/unloading onsite). Since EMFAC Emissions and Emission Rate outputs IDLEX in ton/day or in g/vehcle-day, respectively, but does not identify hr/day, the IDLEX output was not used. Instead, EMFAC PL was used to generate IDLEX in g/vehicle-hr and used in the analysis. To avoid double counting, IDLEX emissions were subtracted from Total Exhaust emissions and quantified separately using EMFAC PL.

Table A-35. continued)

EMFAC Output - Truck Emission Factors - Onsite Transit

CO2_RUNEX	CH4_RUNEX	N2O_RUNEX	ROG_RUNEX	TOG_RUNEX	CO_RUNEX	SOx_RUNEX	NH3_RUNEX	PM10_PMBW	PM2.5_PMBW	Fuel Consumpt	Energy Consun	DPM
7.770884369	8.01306E-05	0.001224306	0.001725191	0.001963998	0.005929384	7.35856E-05	0.000374368	0.000370017	0.000129506	0.694170022	0	7.80496E-05
0.409416899	0.000731868	8.34623E-05	1.04569E-05	0.000746925	0.002575284	0	0.000118975	1.67752E-05	5.87131E-06	0.047322349	0	0
8.050353061	7.40935E-05	0.001268336	0.001595213	0.001816029	0.005729858	7.6232E-05	0.000417226	0.000382449	0.000133857	0.71913485	0	7.33718E-05
0.39514292	0.000706024	8.05525E-05	1.00877E-05	0.000720549	0.002494789	0	0.000115491	1.61834E-05	5.66419E-06	0.045672495	0	0
7.962062473	7.96385E-06	0.001254426	0.000171459	0.000195193	0.002300439	7.5396E-05	0.000593923	0.00037008	0.000129528	0.711247887	0	2.31583E-05
0	0	0	0	0	0	0	0	2.70467E-08	9.46634E-09	0	1.001930866	0
0.111624622	0.000195997	2.27554E-05	2.80041E-06	0.000200029	0.000732955	0	3.48336E-05	4.50486E-06	1.5767E-06	0.012902104	0	0
g/mi	g/mi	g/mi	g/mi	g/mi	g/mi	g/mi	g/mi	g/mi	g/mi	DGE gal/mi	kW-hr/mi	g/mi
CO2_RUNEX	CH4_RUNEX	N2O_RUNEX	ROG_RUNEX	TOG_RUNEX	CO_RUNEX	SOx_RUNEX	NH3_RUNEX	PM10_PMBW	PM2.5_PMBW	Fuel Consumption	Energy Consumption	DPM
3158.631373	*0.302476111*	*0.504721704*	*0.634725974*	*0.99693994*	*3.178297987*	*0.028462921*	*0.194934842*	*0.149218048*	*0.052226317*	*0.315451156*	*0*	*0.028767595*
2954.249865	*0.074631397*	*0.467334628*	*0.063763565*	*0.144616228*	*1.10995182*	*0.027588205*	*0.230068773*	*0.13707459*	*0.047976107*	*0.292084226*	*0.000404127*	*0.008473891*

Table A-36.
Paved Road Dust Emission Factors

Emission Source[1]	(sL) Silt Loading (g/m2)[2]	(k) Particle Size Multiplier - PM10 (g/VMT)[3]	(k) Particle Size Multiplier - PM2.5 (g/VMT)[3]	(W) Average Vehicle Weight on Road (tons)[4]	Fraction of Travel by Roadway Type[5]	(E) Uncontrolled PM10 Emission Factor (g/VMT)	(E) Uncontrolled PM2.5 Emission Factor (g/VMT)	(E) Controlled PM10 Emission Factor (g/VMT)[6]	(E) Controlled PM2.5 Emission Factor (g/VMT)[6]
Onsite Transit									
Onsite Trucks	0.135	1.00	0.15	25.0		4.30	0.65	3.61	0.54
Onsite Equipment	0.135	1.00	0.15	4.5		0.75	0.11	0.63	0.09
Offsite Transit									
Freeway	0.015	1.00	0.15	2.4	0.44	0.05	0.01		
Major	0.013	1.00	0.15	2.4	0.44	0.05	0.01		
Collector	0.013	1.00	0.15	2.4	0.07	0.05	0.01		
Local	0.135	1.00	0.15	2.4	0.05	0.39	0.06		
Composite EF for Offsite Transit - all vehicles						0.07	0.01		

Notes:

1. Emission factors were calculated using: 1) EPA AP-42, Chapter 13.2; and 2) CARB Miscellaneous Process Methodology 7.9, Entrained Road Travel, Paved Road Dust, Revised and Updated March 2021. Conservatively, downward adjustment due to annual precipitation was omitted.
The equation is: E = k (sL)^0.91 x (W)^1.02

2. Silt loading was obtained from CARB Miscellaneous Process Methodology 7.9, Tables 3a, 3c.1, and 3c.3.

3. Particle size multiplier (k) for PM10 is the same in EPA AP42 and CARB methodologies. Particle size multiplier for PM2.5 is based on CARB methodology which reflects a more appropriate PM2.5/PM10 fraction to California than AP42.

4. Average weight (W) for on-site transit was based on trucks with GVWR of 80,000 lbs (40 tons). A loaded truck would weigh 40 tons and an empty truck would weigh 10 tons (assumed) for an average of 25 ton). Average weight (W) for on-site roads used by on-site mobile equipment was based on the weight of a typical forklift (9,000 lb). Different vehicle weights were used for on-site truck transit and on-site equipment transit becuase trucks typically drive in designated areas only. Average weight (W) for offsite transit was obtained from the CARB methodology for California roads.

5. Fraction of travel by roadway type was obtaned from CARB Miscellaneous Process Methodology 7.9, Table 2.

6. On-site roads are sweapt routinely. Control efficiency: 16% 2006 WRAP Fugitive Dust Handbook.

Table A-37.
Worker Vehicle Emissions

	Activity			Emissions (lb/day)						(mton/yr)				Fuel and Electricity Use		
Analysis Year	**Worker Vehicles per Day**	**1-Way Distance Traveled (miles)**	**2, 1-way trips per round-trip**	**PM_{10}**	**$PM_{2.5}$**	**NO_x**	**SO_x**	**CO**	**VOC**	**CO_2**	**CH_4**	**N_2O**	**CO2e**	**Gasoline (gal/yr)**	**Diesel (gal/yr)**	**Electricity (kW-hr/yr)**
2021/2022 Baseline	140	18.5	2	0.979	0.193	1.255	0.036	16.560	0.706	608.241	0.026	0.020	614.8	70,496.8	180.1	22,326.7
Proposed Project - Phase 1	140	18.5	2	0.976	0.191	1.064	0.035	14.686	0.609	585.134	0.023	0.018	591.1	67,825.7	166.6	29,832.8

Source:
Worker vehicle activity was provided by SAR in *SAR_ThroughputData_11_1_2022.pdf* . Transit distance is from CalEEMod2017, Appendix D, Table 4.2 for Los Angeles County.
Notes:
Emissions reflect round-trip transit.
Annual operation (days/yr): 365

Table A-38.
Worker Vehicle Emission Factors

	Emission Factors (g/mi)														
Analysis Year	PM_{10ex}	$PM10_{tw}$	$PM10_{bw}$	$PM_{2.5ex}$	$PM2.5_{tw}$	$PM2.5_{bw}$	NO_x	SO_x	CO	VOC	CO_2	CH_4	N_2O	$PM10_{dust}$	$PM2.5_{dust}$
2021/2022 Baseline	0.0020	0.0080	0.0087	0.0018	0.0020	0.0030	0.1099	0.0032	1.4501	0.0618	321.7017	0.0136	0.0106	0.0671	0.0101
Proposed Project - Phase 1	0.0018	0.0080	0.0086	0.0017	0.0020	0.0030	0.0931	0.0031	1.2860	0.0534	309.4801	0.0120	0.0095	0.0671	0.0101

Source:
Composite emission factors reflect composite of diesel, natural gas, plug-in hybrid, and electric vehicles.
Exhaust emission factors were obtained from EMFAC 2021.
PM tire and brake wear emission factors were obtained from EMFAC 2021.
PM entrained road dust emission factors are from CARB Miscellaneous Process Methodology 7.9, Entrained Road Travel, Paved Road Dust. Revised and Updated March 2021.
GHG indirect emission factors from the use of electricity were obtained from The Climate Registry 2022 Emission Factors. Table 3.1 for CAMX eGrid Subregion. May 2022.

Fuel and Electricity Use Rate									
Composite Fuel Rate (gal/mi)	Electricity Composite Rate (kW-hr/mi)	Gasoline VMT%	Diesel VMT%	Plug-In Hybrid VMT% (gasoline)	Plug-In Hybrid VMT% (electricity)	Electricity VMT%	Gasoline Use Rate (gal/mi)	Diesel Use Rate (gal/mi)	Electricity Use Rate (kW-hr/mi)
0.037381	0.011809	98.80%	0.255%	0.946%	25.848%	74.152%	0.037286	9.53E-05	0.011809
0.035961	0.015779	98.66%	0.245%	1.093%	24.088%	75.912%	0.035873	8.81E-05	0.015779

Source:
EMFAC 2021
Notes:
Gasoline rate combines gasoline and plug-in hybrid vehicles because most autos are gasoline-fueled, not diesel-fue

Table A-39.
POLA Switch Locomotive Fleet Mix

Year	Locomotive Count [1]			Annual Percent of Fuel Consumed [1]			Annual Percent of Horsepower-Hours [2]		
	Genset	Tier 3+	Tier 4	Genset	Tier 3+	Tier 4	Genset	Tier 3+	Tier 4
2021/2022	6	17	1	2%	96%	2%	2.3%	95.7%	2.0%
2023+	6	17	1	2%	96%	2%	2.3%	95.7%	2.0%

Notes:

1. Source for 2021/2022: POLA, 2023. *Inventory of Air Emissions for Calendar Year 2023,* Table 6.1. The analysis assumes the same fleet mix for 2022 and beyond.

2. Annual hp-hrs were calculated from the percent of fuel consumed by scaling by the relative BSFC for each locomotive type. BSFC is 15.2 hp-hr/gal for Tier 3+ and Tier 4 locomotives and 17.9 hp-hr/gal for genset locomotives (POLA and POLB, 2023. *San Pedro Bay Ports Emissions Inventory Methodology Report* . Version 4. Page 47).

Table A-40.

POLA Switch Locomotive Emission Factors (g/hp-hr)

Locomotive Type	HC	CO	NO_x	SO_x	PM_{10}	$PM_{2.5}$ [1]	CO_2	N_2O	CH_4
Genset	0.04	1.51	3.37	0.005	0.05	0.046	578	0.015	0.05
Tier 3+	0.13	1.28	4.2	0.006	0.036	0.033	678	0.017	0.05
Tier 4	0.04	1.28	1.0	0.006	0.015	0.014	678	0.017	0.05
Fleet Average, 2021/2022 [2]	0.13	1.29	4.12	0.006	0.036	0.033	676	0.017	0.05
Fleet Average, 2023+	0.13	1.29	4.12	0.006	0.036	0.033	676	0.017	0.05

Source: POLA and POLB, 2023. *San Pedro Bay Ports Emissions Inventory Methodology Report.* Version 4, Tables 5.1 and 5.2.

Notes:

1. $PM_{2.5}$ emissions are assumed to be 92% of PM_{10} (San Pedro Bay Ports Emissions Inventory Methodology Report. Version 4, Page 47).
2. The fleet average is weighted by the annual percent of horsepower-hours. See Table A-39.

Table A-41.

POLA Switch Locomotive Emission Factors (g/hour)

Locomotive Type	VOC [1][2]	CO	NO_x	SO_x	PM_{10}	$PM_{2.5}$	CO_2	N_2O	CH_4
Maximum Locomotive [3]	27.8	306.5	852.6	1.2	10.2	9.3	137,634	3.5	10.2
Fleet Average, 2021	27.0	260.9	835.7	1.2	7.3	6.7	137,158	3.4	10.2
Fleet Average, 2023+	27.0	260.9	835.7	1.2	7.3	6.7	137,158	3.4	10.2

Notes:

1. For all pollutants, emission factors in g/hp-hr were converted to g/hour by multiplying by the PHL fleet average in-use horsepower of 203 hp, which is based on a 10 percent average load factor (Starcrest LLC, Personal communication with Joseph Ray, January 6, 2022).

2. Hydrocarbons (HC) were converted to VOC by applying a factor of 1.053 (EPA, 2005. *Conversion Factors for Hydrocarbon Emission Components* . Office of Transportation and Air

3. The maximum locomotive represents the highest emission factor from the genset, Tier 3+, and Tier 4 locomotives.

Table A-42.
SAR Switch Locomotive Activity

Analysis Year	Locomotive Use Per Visit (hr/visit) [1]	Annual Locomotive Visits [2]	Annual Locomotive Use (hr/yr)
2021/2022 Baseline	3	200	600
Proposed Project	3	200	600

Notes:

1. Based on distance from nearby PHL yards.
2. Based on 1 locomotive per visit.

Table A-43.

Peak Day Switch Locomotive Emissions, lb/day

Analysis Year	VOC [1]	CO	NO_x	SO_x	PM_{10}	$PM_{2.5}$
2021/2022 Baseline	0.2	2.0	5.6	0.008	0.07	0.06
Proposed Project	0.2	2.0	5.6	0.008	0.07	0.06

Notes:

1. Emissions assume one locomotive visit on the peak day. Used maximum locomotive emission factors for all analysis years.

Table A-44.

Annual Switch Locomotive Emissions, lb/year

Analysis Year	VOC [1]	CO	NO_x	SO_x	PM_{10}	$PM_{2.5}$
2021/2022 Baseline	35.7	345.2	1105.4	1.6	9.6	8.9
Proposed Project	35.7	345.2	1105.4	1.6	9.6	8.9

Table A-45.
Annual Switch Locomotive GHG Emissions, MT/year

Analysis Year	CO_2	N_2O	CH_4
2021/2022 Baseline	82.3	0.002	0.006
Proposed Project	82.3	0.002	0.006

Table A-46.
Emissions from On-Site Sources

	Emissions (lb/day)							Emissions (lb/yr)							Emissions (mton/yr)			
Source Type	**PM_{10}**	**$PM_{2.5}$**	**DPM**	**NO_x**	**SO_x**	**CO**	**VOC**	**PM_{10}**	**$PM_{2.5}$**	**DPM**	**NO_x**	**SO_x**	**CO**	**VOC**	**CO2**	**CH4**	**N2O**	**CO2e**
2021/2022 Baseline																		
Combustion Exhaust - AER Reporting [1]	0.3	0.3	0.1	2.1	0.0	43.8	0.4	96	96	18	663	11	13,681	123	566	0	0	569
Non-Combustion - AER Reporting [2]	19.5	0.0	0.0	0.0	0.0	0.0	0.3	6,085	6,085	0	0	0	0	1,131	0	0	0	0
Combustion Exhaust - Non-AER [3]	2.73	2.50	2.73	84.73	0.42	224.62	5.23	734	669	734	21,262	101	53,502	1,296	3,702	0	0	3,805
Non-Combustion - Non-AER [4]	6.3	2.6	0.0	0.0	0.0	0.0	0.0	649	310	0	0	0	0	0	0	0	0	0
Total 2021/2022 Baseline	**28.9**	**5.4**	**2.8**	**86.9**	**0.5**	**268.5**	**5.9**	**7,564**	**7,160**	**752**	**21,925**	**111**	**67,183**	**2,550**	**4,268**	**0**	**0**	**4,374**
Proposed Project - Phase 1 [5]																		
Combustion Exhaust - AER Reporting	0.3	0.3	0.1	2.1	0.0	43.8	0.4	95.8	95.8	18.1	662.9	10.5	13,681.1	123.1	566.0	0.0	0.0	569.5
Non-Combustion - AER Reporting	19.5	0.0	0.0	0.0	0.0	0.0	0.3	6,085.2	6,085.2	0.0	0.0	0.0	0.0	1,130.6	0.0	0.0	0.0	0.0
Combustion Exhaust - Non-AER	2.7	2.5	2.7	84.7	0.4	224.6	5.2	733.5	669.1	733.5	21,261.7	100.9	53,501.6	1,296.3	3,702.3	0.3	0.3	3,804.9
Non-Combustion - Non-AER	6.3	2.6	0.0	0.0	0.0	0.0	0.0	649	310	0	0	0	0	0	0	0	0	0
Total Proposed Project - Phase 1	**28.9**	**5.4**	**2.8**	**86.9**	**0.5**	**268.5**	**5.9**	**7,564**	**7,160**	**752**	**21,925**	**111**	**67,183**	**2,550**	**4,268**	**0**	**0**	**4,374**

Notes:

Table combines emissions for sources reported in the 2021/2022 AER and emissions for non-AER sources.

1. Stationary Combustion Exhaust emissions reflect external and internal combustion sources reported in the 2021/2022 AER (i.e., RTO burner, RTO NGI, heaters, boilers, and ICE engines).
2. Non-Combustion emissions reflect emissions reported in the 2021/2022 AER (i.e., spray coating, aerosol degreaser, storage tanks, cement silos, shredder stack and fugitives, metal shear, non-ferrous container loading, MRP, welding electrodes, and storage pile emissions).
3. Mobile Combustion Exhaust emissions include exhaust emissions from mobile sources not reported in the 2021/2022 AER: mobile shears, front loaders, forklifts, etc. Emissions are conservative because they reflect engine tier standards, which represent the maximum allowable em
4. Mobile Fugitive emissions include fugitive emissions from mobile sources not reported in the 2021/2022 AER: mobile shears, loading of bucket crane, other loading/unloading, and dust from mobile equipment transit onsite.
5. Annual activty and peak day activity would not increase from baseline.

Table A-47.

Combustion Exhaust and Fugitive Emissions from On-Site Sources Reported in the AER

Source				Fuel/Product			Emissions (lb/day)							Emissions (lb/yr)										(mton/yr)										Emission Factors										
Type	**AER ID**	**A/N**	**Description**	**Type**	**Amount**	**Units**	**PM_{10}**	**$PM_{2.5}$**	**DPM**	**NO_x**	**SO_x**	**CO**	**VOC**	**PM_{10}**	**$PM_{2.5}$**	**DPM**	**NO_x**	**SO_x**	**CO**	**VOC**	**CO2**	**CH4**	**N2O**	**PM_{10}**	**$PM_{2.5}$**	**DPM**	**NO_x**	**SO_x**	**CO**	**VOC**	**Units**	**CO2**	**Units**	**CH4**	**N2O**	**Units**
External Combustion	ES20	567982	RTO Burner	natural gas	1.920752	mmscf	0.046	0.046	0.000	0.155	0.004	16.335	0.043	14.41	14.41	0.00	48.23	1.15	5096.37	13.45	104.57	0.002	0.002	7.5	7.5	0	25.11	0.6	2,653.32	7	lb/mmscf	0.05444	kg/scf	0.9	0.9	g/MMBtu
External Combustion	ES20	567982	RTO NGI	natural gas	8.271948	mmscf	0.199	0.199	0.000	1.067	0.016	25.562	0.186	62.04	62.04	0.00	332.86	4.96	7975.40	57.90	450.32	0.008	0.008	7.5	7.5	0	40.24	0.6	964.15	7	lb/mmscf	0.05444	kg/scf	0.9	0.9	g/MMBtu
External Combustion	ES22		Heater - Welding	propane	0.749000	M gal	0.001	0.001	0.000	0.031	0.011	0.008	0.001	0.21	0.21	0.00	9.59	3.45	2.40	0.19	4.28	0.000	0.000	0.28	0.28	0	12.8	4.6	3.2	0.26	lb/Mgal	5.72	kg/gal	0.9	4	g/MMBtu
External Combustion	ES30		Boiler - Steam Cl	propane	0.026179	M gal	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.01	0.01	0.00	0.34	0.12	0.08	0.01	0.15	0.000	0.000	0.28	0.28	0	12.8	4.6	3.2	0.26	lb/Mgal	5.72	kg/gal	0.9	4	g/MMBtu
Internal Combusion	ES1	472881	Stationary I.C.E.	diesel	0.048819	M gal	0.005	0.005	0.005	0.073	0.000	0.016	0.006	1.64	1.64	1.64	22.90	0.01	4.98	1.83	0.50	0.000	0.000	33.5	33.5	33.5	469	0.21	102	37.5	lb/Mgal	10.21	kg/gal	0.93	0.87	g/gal
Internal Combusion	ES21		Portable I.C.E 4 S	diesel	0.4912	M gal	0.053	0.053	0.053	0.738	0.000	0.161	0.059	16.46	16.46	16.46	230.37	0.10	50.10	18.42	5.02	0.000	0.000	33.5	33.5	33.5	469	0.21	102	37.5	lb/Mgal	10.21	kg/gal	0.93	0.87	g/gal
Internal Combusion	ES21		Portable I.C.E 4 S	gasoline	0.139	M gal	0.003	0.003	0.000	0.045	0.002	1.755	0.092	0.90	0.90	0.00	14.18	0.74	547.66	28.63	1.02	0.000	0.000	6.5	6.5	0	102	5.3	3,940	206	lb/Mgal	7.36	kg/gal	3.03	1.67	g/gal
Internal Combusion	ES29		Portable I.C.E 4 S	propane	0.03184	M gal	0.001	0.001	0.000	0.014	0.000	0.013	0.008	0.16	0.16	0.00	4.43	0.01	4.11	2.64	0.18	0.000	0.000	5	5	0	139	0.35	129	83	lb/Mgal	5.72	kg/gal	0.45	0.64	g/gal
Spray Coating/Spray Booth	ES31		Open Spray, Metal Coating		167	gal							0.225							70.14										0.42	lb/gal					
Use of Organics	ES18		Aersol Degrease	WD-40	7.3125	gal							0.040							12.58										1.72	lb/gal					
Storage Tanks	ES3	472889	Storage Tank and	diesel	411.664	M gal							0.037							11.53										0.028	lb/Mgal					
Storage Tanks	ES19	563870	AST Small <10,000 gallons	gasoline	7.8349	M gal							0.023							7.22										0.921	lb/Mgal					
Other Process Emissions	ES2	472887	Cement Silos		13,590.11	ton	0.043							13.45	13.45									0.00099	0.00099						lb/ton					
Other Process Emissions	ES5	482347	Shredder - Stack Emissions		454,560.61	mton	6.935							2163.71	2163.71					225.92				0.00476	0.00476					0.000497	lb/mton					
Other Process Emissions	ES5	482347	Shredder - Fugitive Emissions		454,560.61	mton	3.272							1020.94	1020.94					803.21				0.002246	0.002246					0.001767	lb/mton					
Other Process Emissions	ES6	502468	Metal Shear Pro	electric	190,596.01	ton	2.205							688.05	688.05									0.00361	0.00361						lb/ton					
Other Process Emissions	ES7	505108	Non-Ferrous Container Loader		25,620.65	ton	0.238							74.30	74.30									0.0029	0.0029						lb/ton					
Other Process Emissions	ES9	519113	MRP		256,585.80	ton	3.993							1245.72	1245.72									0.004855	0.004855						lb/ton					
Other Process Emissions	ES23		Welding Electrodes (E7018)		1,460.00	lb	0.086							26.86	26.86									0.0184	0.0184						lb/lb					
Other Process Emissions	ES24		Welding Electrodes (E6010)		1,330.00	lb	0.109							34.05	34.05									0.0256	0.0256						lb/lb					
Other Process Emissions	ES25		Welding Electrodes (E7024)		710	lb	0.021							6.53	6.53									0.0092	0.0092						lb/lb					
Other Process Emissions	ES27		Welding Electrodes (E309)		100	lb	0.004							1.20	1.20									0.01197	0.01197						lb/lb					
Other Process Emissions	ES28		Storage Pile - Fugitive Emission		122,783.15	ton	2.597							810.37	810.37									0.0066	0.0066						lb/ton					
2021/2022 Baseline Total							*19.81*	*0.31*	*0.06*	*2.12*	*0.03*	*43.85*	*0.72*	*6,181.01*	*6,181.01*	*18.09*	*662.89*	*10.54*	*13,681.10*	*1,253.66*																	
2021/2022 Baseline Total (ton/yr)														*3.09*	*3.09*	*0.01*	*0.33*	*0.01*	*6.84*	*0.63*	566.04	0.01	0.01													

Source/Notes:

2021/2022 fuel use, criteria pollutant emission factors, and emissions were provided by SAR in *TI Jul21-Jun22 AER Criteria Pollutants.pdf.*

GHG for external combustion sources were calculated using emission factors from The Climate Registry 2022 emission factors, Tables 1.1 and 1.7

GHG for internal combustion sources were calculated using emission factors from The Climate Registry 2022 emission factors, Tables 1.1 and 2.7

For combustion sources, PM2.5 is conservatively assumed to be 100% of PM10.

For fugitive dust sources, PM2.5 was conservatively assumed to be 100% of PM10.

Natural gas heating value (Btu/scf): 1050

Propane heating value (Btu/gal): 90500 Source: AP-42, Chapter 1.5. 2008.

Operating schedule: 312 days/year

Storage pile emissions reflect both passive storage and loading/unloading to/from storage pile, per*Port CEQA Follow-up Questions_20230126.docx.*

Table A-48.

Fuel Use from On-Site Sources Reported in the AER

	Amount	Units
Natural Gas	10	mmscf/yr
Diesel	540	gal/yr
Propane	807	gal/yr
Gasoline	139	gal/yr

Source:

Provided by SAR in *TI Jul21-Jun22 AER Criteria Pollutants.pdf.*

Electricity use is accounted for in total electricity use provided by SAR and accounted for in indirect GHG emission calculations.

Table A-49.
Combustion Exhaust and Road Dust Emissions from On-Site Sources not Subject to AER Reporting

							Vehicle Miles Traveled					Exhaust Emission Factors (g/hp-hr)							(kg/gal fuel)			Load Factor
Analysis Year	Equipment ID	Equipment Type	Fuel Type	Tier Level	Activity (hr/yr)	Fuel Use (gal/yr)	VMT (mi/month)	VMT (mi/yr)	VMT (mi/day)	Power Rating (hp)	Ship-Loading Equipment	PM10	PM2.5	DPM	NOX	SOX	CO	VOC	CO2	CH4	N2O	
2021/2022 Baseline	0404001	Bulldozer-Back up	Diesel	Tier 3	192	1052	1	12	0.134	200	yes	0.090	0.080	0.090	2.32	0.005	2.60	0.090	10.210	0.00094	0.00087	0.4
	0404002	Bulldozer	Diesel	Tier 3	311	1481	1	12	0.134	170	yes	0.110	0.100	0.110	2.32	0.005	3.70	0.090	10.210	0.00094	0.00087	0.4
	0403005	Bulldozer	Diesel	Tier 3	407	3487	1	12	0.134	310	yes	0.090	0.080	0.090	2.32	0.005	2.60	0.090	10.210	0.00094	0.00087	0.4
	0503001	Backhoe/Loader	Diesel	Tier4 final	0	0	0	0	0.000	143	0	0.010	0.010	0.010	0.26	0.005	3.70	0.050	10.210	0.00094	0.00087	0.37
	0107026	Excavator (Shear)	Diesel	Tier 3	2508	10534	5	60	0.192	480	0	0.090	0.080	0.090	2.32	0.005	2.60	0.090	10.210	0.00094	0.00087	0.38
	0601100	Forklift - Propane	Propane	Tier 4 Final	93	NA	3	36	0.115	27.6	0											
	0609014	Forklift	Diesel	Tier 2	585	293	3	36	0.115	59	0	0.190	0.180	0.190	4.75	0.005	3.70	0.170	10.210	0.00094	0.00087	0.2
	1312014	Haul Truck	Diesel	Tier 3	644	6487	35	420	1.346	525	0	0.090	0.080	0.090	2.32	0.005	2.60	0.090	10.210	0.00094	0.00087	0.38
	1312013	Haul Truck	Diesel	Tier 3	738	7440	40	480	1.538	525	0	0.090	0.080	0.090	2.32	0.005	2.60	0.090	10.210	0.00094	0.00087	0.38
	1317003	Haul Truck	Diesel	Tier 4 Final	1210	3485	100	1200	13.448	598	yes	0.010	0.010	0.010	0.26	0.005	2.60	0.050	10.210	0.00094	0.00087	0.38
	1317001	Haul Truck	Diesel	Tier 4 Final	1232	3564	100	1200	13.448	598	yes	0.010	0.010	0.010	0.26	0.005	2.60	0.050	10.210	0.00094	0.00087	0.38
	1317002	Haul Truck	Diesel	Tier 4 Final	1207	3508	100	1200	13.448	598	yes	0.010	0.010	0.010	0.26	0.005	2.60	0.050	10.210	0.00094	0.00087	0.38
	0306003	Loader (Broom)	Diesel	Repowered Tier 3	703	2828	5	60	0.192	232	0	0.090	0.080	0.090	2.32	0.005	2.60	0.090	10.210	0.00094	0.00087	0.37
	0306002	Loader (Broom)-Back Up	Diesel	Repowered Tier 3	243	559	1	12	0.038	232	0	0.090	0.080	0.090	2.32	0.005	2.60	0.090	10.210	0.00094	0.00087	0.37
	0308005	Loader	Diesel	Tier 3	330	1338	1	12	0.038	318	0	0.090	0.080	0.090	2.32	0.005	2.60	0.090	10.210	0.00094	0.00087	0.37
	0309015	Loader	Diesel	Tier-3-Engine Manufactured 2010	3173	20,518	320	3840	12.308	210	0	0.090	0.080	0.090	2.32	0.005	2.60	0.090	10.210	0.00094	0.00087	0.37
	0309016	Loader	Diesel	Tier 4 Final	2793	16704	300	3600	11.538	527	0	0.010	0.010	0.010	0.26	0.005	2.60	0.050	10.210	0.00094	0.00087	0.37
	0309017	Loader	Diesel	Tier 4 Final	3259	14991	250	3000	9.615	527	0	0.010	0.010	0.010	0.26	0.005	2.60	0.050	10.210	0.00094	0.00087	0.37
	0309026	Loader	Diesel	Tier 4 Final	3190	37115	300	3600	11.538	560	0	0.010	0.010	0.010	0.26	0.005	2.60	0.050	10.210	0.00094	0.00087	0.37
	0306029	Loader	Diesel	Tier 4 Final	3010	5564	280	3360	10.769	174	0	0.010	0.010	0.010	0.26	0.005	3.70	0.050	10.210	0.00094	0.00087	0.37
	301029	Loader	Diesel	Tier 4 Final	617	1112	5	60	0.192	74	0	0.010	0.010	0.010	4.75	0.005	3.70	0.170	10.210	0.00094	0.00087	0.37
	0305030	Loader	Diesel	Tier 4 Final	1341	6034	40	480	1.538	174	0	0.010	0.010	0.010	0.26	0.005	3.70	0.050	10.210	0.00094	0.00087	0.37
	1004007	Manlift	Diesel	Repowered Tier 3	115	69	3	36	0.115	75	0	0.110	0.100	0.110	2.74	0.005	3.70	0.090	10.210	0.00094	0.00087	0.31
	1004011	Manlift	Diesel	Tier 2-Engine manufacture	460	302	3	36	0.115	75	0	0.190	0.180	0.190	4.75	0.005	3.70	0.170	10.210	0.00094	0.00087	0.31
	0108011	Material Handler (Grapple)	Diesel	Tier 3	2125	20381	3	36	0.115	371	0	0.090	0.080	0.090	2.32	0.005	2.60	0.090	10.210	0.00094	0.00087	0.4
	0108014	Material Handler (Grapple)	Diesel	Tier 3	1902	17497	3	36	0.115	371	0	0.090	0.080	0.090	2.32	0.005	2.60	0.090	10.210	0.00094	0.00087	0.4
	0127001	Material Handler (Grapple)	Diesel	Tier 3	1867	27304	3	36	0.115	390	0	0.090	0.080	0.090	2.32	0.005	2.60	0.090	10.210	0.00094	0.00087	0.4
	0127002	Material Handler (Grapple)	Diesel	Tier 4i	1851	27535	3	36	0.115	390	0	0.010	0.010	0.010	1.29	0.005	2.60	0.060	10.210	0.00094	0.00087	0.4
	0110007	Material Handler (Grapple)	Diesel	Repowered Tier 3	600	5880	1	12	0.038	450	0	0.090	0.080	0.090	2.32	0.005	2.60	0.090	10.210	0.00094	0.00087	0.4
	0131023	Material Handler (Grapple)	Diesel	Tier 4 Final	4159	28808	2	24	0.077	560	0	0.010	0.010	0.010	0.26	0.005	2.60	0.050	10.210	0.00094	0.00087	0.4
	0131031	Material Handler (Grapple)	Diesel	Tier 4 Final	2190	12450	2	24	0.077	560	0	0.010	0.010	0.010	0.26	0.005	2.60	0.050	10.210	0.00094	0.00087	0.4

Table A-49.
Combustion Exhaust and Road Dust Emissions from On-Site Sources not Subject to AER Reporting

							Vehicle Miles Traveled					Exhaust Emission Factors (g/hp-hr)							(kg/gal fuel)			Load Factor
Analysis Year	Equipment ID	Equipment Type	Fuel Type	Tier Level	Activity (hr/yr)	Fuel Use (gal/yr)	VMT (mi/month)	VMT (mi/yr)	VMT (mi/day)	Power Rating (hp)	Ship-Loading Equipment	PM10	PM2.5	DPM	NOX	SOX	CO	VOC	CO2	CH4	N2O	
	0131034	Material Handler (Grapple)	Diesel	Tier 4 Final	0	0	2	24	0.077	560	0	0.010	0.010	0.010	0.26	0.005	2.60	0.050	10.210	0.00094	0.00087	0.4
	0107026	Excavator (Shear)	Diesel	Tier 3	2508	10534	5	60	0.192	480	0	0.090	0.080	0.090	2.32	0.005	2.60	0.090	10.210	0.00094	0.00087	0.38
	0129040	Material Handler (Shear)	Diesel	Tier 4 Final	988	10681	2	24	0.077	425	0	0.010	0.010	0.010	0.26	0.005	2.60	0.050	10.210	0.00094	0.00087	0.4
	0110003	Material Handler (Magnet)	Diesel	Repowered Tier 3	133	1064	1	12	0.038	512	0	0.090	0.080	0.090	2.32	0.005	2.60	0.090	10.210	0.00094	0.00087	0.4
	0110001	Material Handler (Magnet)	Diesel	Repowered Tier 3	865	9331	2	24	0.077	475	0	0.090	0.080	0.090	2.32	0.005	2.60	0.090	10.210	0.00094	0.00087	0.4
	0108013	Material Handler (Magnet)	Diesel	Tier 4	1725	19445	3	36	0.115	371	0	0.010	0.010	0.010	0.26	0.005	2.60	0.050	10.210	0.00094	0.00087	0.4
	0209001	Mobile Crane	Diesel	Tier 4i	544	1184	3	36	0.115	312	0	0.010	0.010	0.010	1.29	0.005	2.60	0.060	10.210	0.00094	0.00087	0.29
	0208005	Mobile Crane	Diesel	Tier 4 Final	0	0	3	36	0.115	270	0	0.010	0.010	0.010	0.26	0.005	2.60	0.050	10.210	0.00094	0.00087	0.29
	0220001	Mobile Crane	Diesel/Electric	Tier4 final	1072	0	1	12	0.134	751	yes	0.020	0.020	0.020	2.24	0.005	2.60	0.050	10.210	0.00094	0.00087	0.29
	3501010	Rail Pusher	Diesel	Tier 4i	1328	1593	5	60	0.192	194	0	0.010	0.010	0.010	1.29	0.005	2.60	0.060	10.210	0.00094	0.00087	0.4
	0705035	Skid Steer Loader	Diesel	Tier 2	950	1140	10	120	0.385	70	0	0.190	0.180	0.190	4.75	0.005	3.70	0.170	10.210	0.00094	0.00087	0.37
	0705043	Skid Steer Loader	Diesel	Tier 4i	498	627	7	84	0.269	56	0	0.110	0.100	0.110	2.74	0.005	3.70	0.090	10.210	0.00094	0.00087	0.37
	0714032	Skid Steer Loader	Diesel	Tier 4 Final	1150	1265	10	120	0.385	73	0	0.010	0.010	0.010	4.75	0.005	3.70	0.170	10.210	0.00094	0.00087	0.37
	1208011	Street Sweeper	Diesel	Tier4 final	1918	4412	320	3840	12.308	220	0	0.010	0.010	0.010	0.26	0.005	2.60	0.050	10.210	0.00094	0.00087	0.46
	0620010	Telehandler/ Forklift	Diesel	Tier 4 Final	853	682	30	360	1.154	130	0	0.010	0.010	0.010	0.26	0.005	3.70	0.050	10.210	0.00094	0.00087	0.29
	1316002	Water Truck	Diesel	Tier 4 Final	2839	11449	120	1440	4.615	444	0	0.010	0.010	0.010	0.26	0.005	2.60	0.050	10.210	0.00094	0.00087	0.38
	1316001	Water Truck-Back Up	Diesel	Tier 3	280	891	10	120	0.385	350	0	0.090	0.080	0.090	2.32	0.005	2.60	0.090	10.210	0.00094	0.00087	0.38
	0615001	CAT *Electric*	Electric	N/A	30	N/A	30	360	1.154	N/A	0											
	0615002	CAT *Electric*	Electric	N/A	30	N/A	30	360	1.154	N/A	0											
	0615003	CAT *Electric*	Electric	N/A	30	N/A	30	360	1.154	N/A	0											
	0615004	CAT *Electric*	Electric	N/A	30	N/A	30	360	1.154	N/A	0											
	0613001	Fork *ELECTRIC*	Electric	N/A	75	N/A	75	900	2.885	N/A	0											
	3501127	Rail Car *ELECTRIC*	Electric	N/A	10	N/A	150	1800	5.769	N/A	0											
2021/2022 Baseline Total								*33516.00*	*136.61*													

Source:
Equipment inventory, engine hp, activity, fuel use, and engine tier were provided by SAR in *SA Terminal Island -Off Road Equipment Inventory Version 2.17.23.xlsx* .
Exhaust emission factors (PM, NOx, CO, ROG) were obtained from CalEEMod 2022, Appendix G, Table G-13; SOx emission factors were obtained from Table G-11.
Exhaust emission factors (CO_2, CH_4, N_2O) were obtained from 2022 Climate Registry Default Emission Factors, Tables 2.1 and 2.7.
Engine load factors were obtained from CalEEMod 2022, Appendix G, Table G-12.
CO_2e reflects: IPCC 2007. Intergovernmental Panel on Climate Change. 4th Assessment Report. This AR version is consistent with the Port of Los Angeles 2020 Emissions Report.
Road dust emissions were calculated using: 1) EPA AP-42, Chapter 11.12; and 2) CARB Miscellaneous Process Methodology 7.9, Entrained Road Travel, Paved Road Dust, Revised and Updated March 2021. Conservatively, downward adjustment due to annual precipitation was omitted.
Notes:
Operation schedule: 312 days/year
Operation schedule: 12 months/year
Number of ship loading days: 89 days/year
Emission factors are conservative because they reflect engine tier standards, which represent the maximum allowable emission factors.

Table A-49. (continued)
Combustion Exhaust and Road Dust Emissions from On-Site Sources not Subject to AER Reporting

Exhaust Emissions (lb/day)							Exhaust Emissions (lb/yr)							Emissions (mton/yr)				Road Dust Emission Factors (g/mi)		Road Dust Emissions (lb/day)		Road Dust Emissions (lb/yr)	
PM10	PM2.5	DPM	NOX	SOX	CO	VOC	PM10	PM2.5	DPM	NOX	SOX	CO	VOC	CO2	CH4	N2O	CO2e	PM10	PM2.5	PM10	PM2.5	PM10	PM2.5
0.034	0.030	0.034	0.880	0.002	0.987	0.034	3.05	2.71	3.05	78.56	0.17	88.04	3.05	10.74	0.00	0.00	11.04	0.75	0.65	0.00	0.00	0.02	0.02
0.057	0.052	0.057	1.212	0.003	1.933	0.047	5.13	4.66	5.13	108.16	0.23	172.50	4.20	15.12	0.00	0.00	15.54	0.75	0.65	0.00	0.00	0.02	0.02
0.112	0.100	0.112	2.893	0.006	3.242	0.112	10.01	8.90	10.01	258.13	0.56	289.28	10.01	35.60	0.00	0.00	36.59	0.75	0.65	0.00	0.00	0.02	0.02
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.75	0.65	0.00	0.00	0.00	0.00
0.291	0.259	0.291	7.499	0.016	8.404	0.291	90.77	80.68	90.77	2339.74	5.04	2622.12	90.77	107.55	0.01	0.01	110.53	0.75	0.65	0.00	0.00	0.10	0.09
																		0.75	0.65	0.00	0.00	0.06	0.05
0.009	0.009	0.009	0.232	0.000	0.180	0.008	2.89	2.74	2.89	72.29	0.08	56.31	2.59	2.99	0.00	0.00	3.07	0.75	0.65	0.00	0.00	0.06	0.05
0.082	0.073	0.082	2.106	0.005	2.360	0.082	25.49	22.66	25.49	657.12	1.42	736.43	25.49	66.23	0.01	0.01	68.07	0.75	0.65	0.00	0.00	0.69	0.60
0.094	0.083	0.094	2.414	0.005	2.705	0.094	29.21	25.97	29.21	753.03	1.62	843.92	29.21	75.96	0.01	0.01	78.07	0.75	0.65	0.00	0.00	0.79	0.68
0.068	0.068	0.068	1.766	0.034	17.662	0.340	6.06	6.06	6.06	157.61	3.03	1576.05	30.31	35.58	0.00	0.00	36.57	0.75	0.65	0.02	0.02	1.98	1.71
0.069	0.069	0.069	1.798	0.035	17.983	0.346	6.17	6.17	6.17	160.47	3.09	1604.71	30.86	36.39	0.00	0.00	37.40	0.75	0.65	0.02	0.02	1.98	1.71
0.068	0.068	0.068	1.762	0.034	17.618	0.339	6.05	6.05	6.05	157.21	3.02	1572.14	30.23	35.82	0.00	0.00	36.81	0.75	0.65	0.02	0.02	1.98	1.71
0.038	0.034	0.038	0.989	0.002	1.109	0.038	11.97	10.64	11.97	308.65	0.67	345.90	11.97	28.87	0.00	0.00	29.67	0.75	0.65	0.00	0.00	0.10	0.09
0.013	0.012	0.013	0.342	0.001	0.383	0.013	4.14	3.68	4.14	106.69	0.23	119.56	4.14	5.71	0.00	0.00	5.87	0.75	0.65	0.00	0.00	0.02	0.02
0.025	0.022	0.025	0.637	0.001	0.713	0.025	7.70	6.85	7.70	198.59	0.43	222.56	7.70	13.66	0.00	0.00	14.04	0.75	0.65	0.00	0.00	0.02	0.02
0.157	0.139	0.157	4.042	0.009	4.529	0.157	48.92	43.48	48.92	1260.97	2.72	1413.16	48.92	209.49	0.02	0.02	215.29	0.75	0.65	0.02	0.02	6.33	5.47
0.038	0.038	0.038	1.001	0.019	10.005	0.192	12.01	12.01	12.01	312.16	6.00	3121.65	60.03	170.55	0.02	0.01	175.27	0.75	0.65	0.02	0.02	5.94	5.13
0.045	0.045	0.045	1.167	0.022	11.675	0.225	14.01	14.01	14.01	364.25	7.00	3642.48	70.05	153.06	0.01	0.01	157.30	0.75	0.65	0.02	0.01	4.95	4.28
0.047	0.047	0.047	1.214	0.023	12.143	0.234	14.57	14.57	14.57	378.86	7.29	3788.62	72.86	378.94	0.03	0.03	389.44	0.75	0.65	0.02	0.02	5.94	5.13
0.014	0.014	0.014	0.356	0.007	5.066	0.068	4.27	4.27	4.27	111.08	2.14	1580.69	21.36	56.81	0.01	0.00	58.38	0.75	0.65	0.02	0.02	5.54	4.79
0.001	0.001	0.001	0.567	0.001	0.442	0.020	0.37	0.37	0.37	176.90	0.19	137.80	6.33	11.35	0.00	0.00	11.67	0.75	0.65	0.00	0.00	0.10	0.09
0.006	0.006	0.006	0.159	0.003	2.257	0.031	1.90	1.90	1.90	49.49	0.95	704.22	9.52	61.61	0.01	0.01	63.31	0.75	0.65	0.00	0.00	0.79	0.68
0.002	0.002	0.002	0.052	0.000	0.070	0.002	0.65	0.59	0.65	16.15	0.03	21.81	0.53	0.70	0.00	0.00	0.72	0.75	0.65	0.00	0.00	0.06	0.05
0.014	0.014	0.014	0.359	0.000	0.280	0.013	4.48	4.24	4.48	112.00	0.12	87.24	4.01	3.08	0.00	0.00	3.17	0.75	0.65	0.00	0.00	0.06	0.05
0.201	0.178	0.201	5.170	0.011	5.793	0.201	62.57	55.62	62.57	1612.90	3.48	1807.56	62.57	208.09	0.02	0.02	213.85	0.75	0.65	0.00	0.00	0.06	0.05
0.179	0.160	0.179	4.627	0.010	5.185	0.179	56.00	49.78	56.00	1443.64	3.11	1617.87	56.00	178.64	0.02	0.02	183.59	0.75	0.65	0.00	0.00	0.06	0.05
0.185	0.165	0.185	4.775	0.010	5.351	0.185	57.79	51.37	57.79	1489.65	3.21	1669.43	57.79	278.77	0.03	0.02	286.49	0.75	0.65	0.00	0.00	0.06	0.05
0.020	0.020	0.020	2.632	0.010	5.305	0.122	6.37	6.37	6.37	821.20	3.18	1655.13	38.20	281.13	0.03	0.02	288.92	0.75	0.65	0.00	0.00	0.06	0.05
0.069	0.061	0.069	1.770	0.004	1.984	0.069	21.43	19.05	21.43	552.38	1.19	619.05	21.43	60.03	0.01	0.01	61.70	0.75	0.65	0.00	0.00	0.02	0.02
0.066	0.066	0.066	1.712	0.033	17.115	0.329	20.54	20.54	20.54	534.00	10.27	5339.95	102.69	294.13	0.03	0.03	302.28	0.75	0.65	0.00	0.00	0.04	0.03
0.035	0.035	0.035	0.901	0.017	9.012	0.173	10.81	10.81	10.81	281.19	5.41	2811.85	54.07	127.11	0.01	0.01	130.63	0.75	0.65	0.00	0.00	0.04	0.03

Table A-49. (continued)
Combustion Exhaust and Road Dust Emissions from On-Site Sources not Subject to AER Reporting

Exhaust Emissions (lb/day)							Exhaust Emissions (lb/yr)							Emissions (mton/yr)				Road Dust Emission Factors (g/mi)		Road Dust Emissions (lb/day)		Road Dust Emissions (lb/yr)	
PM10	PM2.5	DPM	NOX	SOX	CO	VOC	PM10	PM2.5	DPM	NOX	SOX	CO	VOC	CO2	CH4	N2O	CO2e	PM10	PM2.5	PM10	PM2.5	PM10	PM2.5
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.75	0.65	0.00	0.00	0.04	0.03
0.291	0.259	0.291	7.499	0.016	8.404	0.291	90.77	80.68	90.77	2339.74	5.04	2622.12	90.77	107.55	0.01	0.01	110.53	0.75	0.65	0.00	0.00	0.10	0.09
0.012	0.012	0.012	0.309	0.006	3.086	0.059	3.70	3.70	3.70	96.27	1.85	962.73	18.51	109.05	0.01	0.01	112.07	0.75	0.65	0.00	0.00	0.04	0.03
0.017	0.015	0.017	0.447	0.001	0.500	0.017	5.40	4.80	5.40	139.31	0.30	156.13	5.40	10.86	0.00	0.00	11.16	0.75	0.65	0.00	0.00	0.02	0.02
0.105	0.093	0.105	2.694	0.006	3.019	0.105	32.61	28.99	32.61	840.59	1.81	942.04	32.61	95.27	0.01	0.01	97.91	0.75	0.65	0.00	0.00	0.04	0.03
0.018	0.018	0.018	0.470	0.009	4.703	0.090	5.64	5.64	5.64	146.73	2.82	1467.31	28.22	198.53	0.02	0.02	204.03	0.75	0.65	0.00	0.00	0.06	0.05
0.003	0.003	0.003	0.449	0.002	0.904	0.021	1.09	1.09	1.09	139.98	0.54	282.13	6.51	12.09	0.00	0.00	12.42	0.75	0.65	0.00	0.00	0.06	0.05
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.75	0.65	0.00	0.00	0.06	0.05
0.115	0.115	0.115	12.921	0.029	14.997	0.288	10.29	10.29	10.29	1152.94	2.57	1338.24	25.74	0.00	0.00	0.00	0.00	0.75	0.65	0.00	0.00	0.02	0.02
0.007	0.007	0.007	0.939	0.004	1.893	0.044	2.27	2.27	2.27	293.07	1.14	590.69	13.63	16.26	0.00	0.00	16.71	0.75	0.65	0.00	0.00	0.10	0.09
0.033	0.031	0.033	0.826	0.001	0.643	0.030	10.31	9.76	10.31	257.66	0.27	200.70	9.22	11.64	0.00	0.00	11.96	0.75	0.65	0.00	0.00	0.20	0.17
0.008	0.007	0.008	0.200	0.000	0.270	0.007	2.50	2.27	2.50	62.33	0.11	84.17	2.05	6.40	0.00	0.00	6.58	0.75	0.65	0.00	0.00	0.14	0.12
0.002	0.002	0.002	1.043	0.001	0.812	0.037	0.68	0.68	0.68	325.27	0.34	253.37	11.64	12.92	0.00	0.00	13.27	0.75	0.65	0.00	0.00	0.20	0.17
0.014	0.014	0.014	0.357	0.007	3.566	0.069	4.28	4.28	4.28	111.26	2.14	1112.58	21.40	45.05	0.00	0.00	46.29	0.75	0.65	0.02	0.02	6.33	5.47
0.002	0.002	0.002	0.059	0.001	0.841	0.011	0.71	0.71	0.71	18.43	0.35	262.31	3.54	6.96	0.00	0.00	7.16	0.75	0.65	0.00	0.00	0.59	0.51
0.034	0.034	0.034	0.880	0.017	8.800	0.169	10.56	10.56	10.56	274.56	5.28	2745.57	52.80	116.89	0.01	0.01	120.13	0.75	0.65	0.01	0.01	2.38	2.05
0.024	0.021	0.024	0.610	0.001	0.684	0.024	7.39	6.57	7.39	190.47	0.41	213.46	7.39	9.10	0.00	0.00	9.35	0.75	0.65	0.00	0.00	0.20	0.17
																		0.75	0.65	0.00	0.00	0.59	0.51
																		0.75	0.65	0.00	0.00	0.59	0.51
																		0.75	0.65	0.00	0.00	0.59	0.51
																		0.75	0.65	0.00	0.00	0.59	0.51
																		0.75	0.65	0.00	0.00	1.48	1.28
																		0.75	0.65	0.01	0.01	2.97	2.57
2.73	*2.50*	*2.73*	*84.73*	*0.42*	*224.62*	*5.23*	*733.54*	*669.06*	*733.54*	*21261.67*	*100.85*	*53501.57*	*1296.31*	*3702.33*	*0.34*	*0.32*	*3804.86*			*0.23*	*0.19*	*55.28*	*47.79*

Table A-50.
Fugitive Dust Emissions from On-Site Sources not Subject to AER Reporting

Source		Activity			Emissions (lb/day)						
Type	**Description**	**Quantity**	**Amount**	**Units**	**PM_{10}**	**$PM_{2.5}$**	**DPM**	**NO_x**	**SO_x**	**CO**	**VOC**
Truck Unloading [1]	Unloading of material trucks		728,994	mton/yr	0.1	0.0					
Process Fugitive Emissions [2]	Mobile metal shear operation		20,965	mton/yr	0.2	0.2					
Loading of Bucket Crane [3]	Loading to bucket crane for subsequent		1,054,929	mton/yr	5.6	2.1					
Material Handling [4]	handling by onsite mobile equipment		905,344	mton/yr	0.2	0.0					
Mobile Equipment Transit [5]	Mobile equipment transit onsite				0.2	0.2					
2021/2022 Baseline Total					*6.34*	*2.58*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*

Source/Notes:
All activity was provided by SAR in e-mail to Port on 2/27/23. See *E-mail_UpdatedActivity_2_27_23.pdf* .

1. Truck unloading: Reflects unloading of scrap metal from incoming trucks. Post-processed, non-ferrous material that is loaded to container trucks is accounted for in the AER (ID ES7 Non-Ferrous Container Loading). Fugitive dust emission factors were obtained from AP42, Chapter 12.5, Table 12.5-4 for pile formation of lump ore. Material is sprayed with water; control efficiency is from 2006 WRAP Handbook, Table 4-2 for water spray at conveyor/transfer point. Emission factors are very conservative becuase they reflect particle sizes much smaller than material being loaded at SAR.

2. Mobile metal shears: Fugitive dust emission factor was assumed to be the same as that reported for stationary metal shear process in the AER (provided by SAR in TI Jul21-Jun22 AER Criteria Pollutants.pdf).

3. Loading of Bucket Crane: Occurs on ship-loading days only. Loaders are used to load ferrous material to the bucket crane, which then loads material to internal vessel holds. Loading into internal vessel holds would not be expected to result in emissions. Fugitive dust emission factors were obtained from AP42, Chapter 12.5, Table 12.5-4 for pile formation of lump ore. Control efficiency is from 2006 WRAP Handbook, Table 4-2 for water spray at conveyor/transfer point. Emission factors are very conservative becuase they reflect particle sizes much smaller than material being loaded at SAR.

dust. Fugitive dust emission factors were obtained from AP42, Chapter 12.5, Table 12.5-4 for batch drop front-end Loader, low silt slag. Control efficiency is from 2006 WRAP Handbook, Table 4-2 for water spray at conveyor/transfer point.

5. Mobile equipment transit: Activity was calculated for each piece of equipment in Table *On-Site Mobile Exhaust and Road Dust Emissions, Non-AER Sources* and summed in this table. Sweeping is used routinely onsite as control. Control efficiency was obtained from 2006 WRAP Fugitive Dust Handbook.

Operating schedule:	312	days/year
2021/2022 Baseline ship loading days	89	days/year
Proposed Project ship loading days:	89	days/year

Table A-50. (continued)
Fugitive Dust Emissions from On-Site Sources not Subject to AER Reporting

Emissions (lb/yr)							(mton/yr)			Emission Factors													Control Efficiency
PM_{10}	$PM_{2.5}$	DPM	NO_x	SO_x	CO	VOC	CO2	CH4	N2O	PM_{10}	$PM_{2.5}$	DPM	NO_x	SO_x	CO	VOC	Units	CO2	Units	CH4	N2O	Units	
12	3									0.00015	0.000043						lb/ton						90%
76	76									0.00361	0.00361						lb/ton						
500	186									0.0043	0.0016						lb/ton						90%
15	4									0.00015	0.000043						lb/ton						90%
46	40																						16%
649.17	*309.63*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*														

Table A-51.
GHG Emission Exhaust Factors for Onsite Material Handling Equipment

	CO2 (kg CO2/gal fuel)	**CH4** (kg CH4/gal fuel)	**N2O** (kg N2O/gal fuel)	**Fuel**
off-road mobile equipment[1],[2]	10.21	0.00094	0.00087	diesel

Source:
[1] CO2 emission factors: 2022 Climate Registry Default Emission Factors, *Table 2.1, US Default CO2 Emission Factors for Transport Fuels.*
[2] N2O and CH4 emission factors: 2022 Climate Registry Default Emission Factors, *Table 2.7, Default CH4 and N2O Emission Factors for Non-Highway Vehicles.*

Table A-52.
Fuel Use from On-site Equipment not Subject to AER Reporting

	Amount	Units
Natural Gas	0	mmscf/yr
Diesel	5	gal/year
Propane	0	gal/year
Gasoline	0	gal/year

Source:
Provided in *SA Terminal Island -Off Road Equipment Inventory_December 2022.xlsx*
Electricity use is accounted for in total electricity use provided by SAR and used in indirect GHG emission calculations.

Table A-53.
Indirect GHG Emissions from Electricity Use Onsite

		Emission Factors			Emissions			
Year	Annual Onsite Electri	CO2 (lb/MWh)	CH4 (lb/GWh)	N2O (lb/GWh)	CO2 (mty)	CH4 (mty)	N2O (mty)	CO2e (mty)
2021/2022 Baseline	17,170,605	513.5	32	4	3,999	0.25	0.03	4015
Proposed Project - Phase 1	17,170,605	513.5	32	4	3,999	0.25	0.03	4,015

Source:
2021/2022 Baseline electricity use was provided by SAR's William Halligan via e-mail to POLA's Nicole Enciso on 11/12/22.
Phase 1 throughput and activity would not change from baseline.
Emission factors were obtained from The Climate Action Registry Default Emission Factors, Table 3.1 for CAMX eGrid Subregion. 2022.
Phase 2 indirect GHG emissions were calculated in CalEEMod.

Table A-54.
Global Warming Potentials (GWP)

CO2	CH4	N2O
1	25	298

IPCC 2007. Intergovernmental Panel on Climate Change. 4*th Assessment Report.* This AR version is consistent with the Port of Los Angeles 2020 Emissions Report.

Table A-55. CalEEMod Output

SAR Wind Down v2 Custom Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

1.2. Land Use Types

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

2.2. Construction Emissions by Year, Unmitigated

3. Construction Emissions Details

3.1. Phase 2 (2034) - Unmitigated

3.3. Phase 2 (2035) - Unmitigated

3.5. Phase 4A-1 (2035) - Unmitigated

3.7. Phase 4A-2 (2035) - Unmitigated

3.9. Phase 3 (2035) - Unmitigated

3.11. Phase 4B-2a (2036) - Unmitigated

3.13. Phase 4B-2a (2037) - Unmitigated

3.15. Phase 4A-3 (2035) - Unmitigated

3.17. Phase 4A-3 (2036) - Unmitigated

3.19. Phase 4B-1 (2036) - Unmitigated

3.21. Phase 4B-1 (2037) - Unmitigated

3.23. Phase 4B-2b (2037) - Unmitigated

3.25. Phase 4C (2037) - Unmitigated

5. Activity Data

5.1. Construction Schedule

5.2. Off-Road Equipment

5.2.1. Unmitigated

5.3. Construction Vehicles

5.3.1. Unmitigated

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

5.5. Architectural Coatings

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

5.6.2. Construction Earthmoving Control Strategies

5.7. Construction Paving

5.8. Construction Electricity Consumption and Emissions Factors

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

5.18.2. Sequestration

5.18.2.1. Unmitigated

8. User Changes to Default Data

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	SAR Wind Down v2
Construction Start Date	9/4/2034
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	3.50
Precipitation (days)	16.0
Location	33.76034911475267, -118.25335137962594
County	Los Angeles-Mojave Desert
City	Los Angeles
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	4613
EDFZ	16
Electric Utility	Los Angeles Department of Water & Power
Gas Utility	—
App Version	2022.1.1.21

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
General Heavy Industry	1,163	1000sqft	26.7	0.00	0.00	—	—	—

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.62	0.61	8.08	30.7	0.09	0.19	15.5	15.6	0.19	2.36	2.48	—	10,564	10,564	0.25	1.41	9.45	10,984
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.61	0.61	8.58	30.5	0.09	0.19	15.5	15.6	0.19	2.36	2.48	—	10,552	10,552	0.25	1.41	0.28	10,964
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.37	0.37	6.12	17.6	0.06	0.13	5.91	6.00	0.13	0.96	1.04	—	7,147	7,147	0.14	1.00	2.90	7,450
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.07	0.07	1.12	3.21	0.01	0.02	1.08	1.09	0.02	0.17	0.19	—	1,183	1,183	0.02	0.17	0.48	1,233

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2034	0.60	0.58	2.40	25.3	0.04	0.09	0.56	0.64	0.09	0.13	0.22	—	5,199	5,199	0.19	0.04	1.03	5,217
2035	0.62	0.61	3.04	30.7	0.06	0.12	15.5	15.6	0.12	2.36	2.48	—	6,277	6,277	0.25	0.05	0.27	6,298
2036	0.32	0.32	8.08	11.1	0.09	0.19	4.95	5.13	0.19	1.72	1.91	—	10,564	10,564	0.08	1.41	9.45	10,984

2037	0.32	0.31	8.01	11.1	0.09	0.19	4.95	5.13	0.19	1.72	1.91	—	10,449	10,449	0.08	1.41	8.34	10,869
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2034	0.59	0.57	2.40	24.5	0.04	0.09	0.56	0.64	0.09	0.13	0.22	—	5,141	5,141	0.20	0.06	0.03	5,163
2035	0.61	0.61	8.58	30.5	0.09	0.17	15.5	15.6	0.17	2.36	2.48	—	9,878	9,878	0.25	1.41	0.28	10,301
2036	0.32	0.31	8.50	11.0	0.09	0.19	4.95	5.13	0.19	1.72	1.91	—	10,552	10,552	0.08	1.41	0.25	10,964
2037	0.31	0.31	8.35	10.9	0.09	0.19	4.95	5.13	0.19	1.72	1.91	—	10,438	10,438	0.08	1.37	0.21	10,849
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2034	0.14	0.13	0.56	5.76	0.01	0.02	0.13	0.15	0.02	0.03	0.05	—	1,200	1,200	0.05	0.01	0.10	1,206
2035	0.37	0.37	2.75	17.6	0.04	0.08	5.91	6.00	0.08	0.96	1.04	—	4,711	4,711	0.14	0.21	0.67	4,777
2036	0.18	0.18	6.12	5.21	0.06	0.13	2.71	2.84	0.13	0.82	0.95	—	7,147	7,147	0.04	1.00	2.90	7,450
2037	0.16	0.15	4.29	5.30	0.05	0.09	2.27	2.37	0.09	0.76	0.85	—	5,211	5,211	0.04	0.69	1.77	5,420
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2034	0.02	0.02	0.10	1.05	< 0.005	< 0.005	0.02	0.03	< 0.005	0.01	0.01	—	199	199	0.01	< 0.005	0.02	200
2035	0.07	0.07	0.50	3.21	0.01	0.02	1.08	1.09	0.02	0.17	0.19	—	780	780	0.02	0.03	0.11	791
2036	0.03	0.03	1.12	0.95	0.01	0.02	0.50	0.52	0.02	0.15	0.17	—	1,183	1,183	0.01	0.17	0.48	1,233
2037	0.03	0.03	0.78	0.97	0.01	0.02	0.42	0.43	0.02	0.14	0.16	—	863	863	0.01	0.11	0.29	897

3. Construction Emissions Details

3.1. Phase 2 (2034) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.44	0.44	2.29	22.9	0.04	0.09	—	0.09	0.09	—	0.09	—	4,659	4,659	0.19	0.04	—	4,675
Demolition	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.44	0.44	2.29	22.9	0.04	0.09	—	0.09	0.09	—	0.09	—	4,659	4,659	0.19	0.04	—	4,675
Demolition	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.10	0.10	0.53	5.34	0.01	0.02	—	0.02	0.02	—	0.02	—	1,085	1,085	0.04	0.01	—	1,089
Demolition	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.10	0.97	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	180	180	0.01	< 0.005	—	180
Demolition	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.16	0.14	0.11	2.37	0.00	0.00	0.56	0.56	0.00	0.13	0.13	—	531	531	< 0.005	< 0.005	1.03	533
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.15	0.13	0.11	1.61	0.00	0.00	0.56	0.56	0.00	0.13	0.13	—	473	473	0.01	0.02	0.03	479
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.03	0.42	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	113	113	< 0.005	< 0.005	0.10	115
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.08	0.00	0.00	0.02	0.02	0.00	0.01	0.01	—	18.8	18.8	< 0.005	< 0.005	0.02	19.0
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.3. Phase 2 (2035) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.44	0.44	2.29	22.9	0.04	0.09	—	0.09	0.09	—	0.09	—	4,659	4,659	0.19	0.04	—	4,675
Demolition	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.04	0.21	2.11	< 0.005	0.01	—	0.01	0.01	—	0.01	—	429	429	0.02	< 0.005	—	430
Demolition	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.04	0.38	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	70.9	70.9	< 0.005	< 0.005	—	71.2
Demolition	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.13	0.12	0.11	1.50	0.00	0.00	0.56	0.56	0.00	0.13	0.13	—	467	467	0.01	0.02	0.02	473
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.01	0.01	0.01	0.16	0.00	0.00	0.05	0.05	0.00	0.01	0.01	—	44.2	44.2	< 0.005	< 0.005	0.04	44.8
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.32	7.32	< 0.005	< 0.005	0.01	7.42
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.5. Phase 4A-1 (2035) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.58	0.58	3.02	30.2	0.06	0.12	—	0.12	0.12	—	0.12	—	6,146	6,146	0.25	0.05	—	6,167
Demolition	—	—	—	—	—	—	15.4	15.4	—	2.33	2.33	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.58	0.58	3.02	30.2	0.06	0.12	—	0.12	0.12	—	0.12	—	6,146	6,146	0.25	0.05	—	6,167
Demolition	—	—	—	—	—	—	15.4	15.4	—	2.33	2.33	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	0.14	0.74	7.44	0.01	0.03	—	0.03	0.03	—	0.03	—	1,516	1,516	0.06	0.01	—	1,521
Demolition	—	—	—	—	—	—	3.80	3.80	—	0.58	0.58	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.03	0.14	1.36	< 0.005	0.01	—	0.01	0.01	—	0.01	—	251	251	0.01	< 0.005	—	252
Demolition	—	—	—	—	—	—	0.69	0.69	—	0.10	0.10	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.03	0.02	0.53	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	123	123	< 0.005	< 0.005	0.21	124
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.03	0.35	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	110	110	< 0.005	< 0.005	0.01	111
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.10	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	27.9	27.9	< 0.005	< 0.005	0.02	28.3
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	4.61	4.61	< 0.005	< 0.005	< 0.005	4.68
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.7. Phase 4A-2 (2035) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.54	0.54	2.79	27.9	0.05	0.11	—	0.11	0.11	—	0.11	—	5,691	5,691	0.23	0.05	—	5,711
Demolition	—	—	—	—	—	—	6.42	6.42	—	0.97	0.97	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.54	0.54	2.79	27.9	0.05	0.11	—	0.11	0.11	—	0.11	—	5,691	5,691	0.23	0.05	—	5,711
Demolition	—	—	—	—	—	—	6.42	6.42	—	0.97	0.97	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	0.13	0.69	6.89	0.01	0.03	—	0.03	0.03	—	0.03	—	1,403	1,403	0.06	0.01	—	1,408

Demolitio	—	—	—	—	—	—	1.58	1.58	—	0.24	0.24	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.13	1.26	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	232	232	0.01	< 0.005	—	233
Demolition	—	—	—	—	—	—	0.29	0.29	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.03	0.66	0.00	0.00	0.16	0.16	0.00	0.04	0.04	—	154	154	< 0.005	< 0.005	0.27	155
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.03	0.44	0.00	0.00	0.16	0.16	0.00	0.04	0.04	—	137	137	< 0.005	0.01	0.01	139
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.12	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	34.8	34.8	< 0.005	< 0.005	0.03	35.3
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	5.77	5.77	< 0.005	< 0.005	< 0.005	5.85
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.9. Phase 3 (2035) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.51	0.51	2.64	26.4	0.05	0.10	—	0.10	0.10	—	0.10	—	5,379	5,379	0.22	0.04	—	5,397
Demolition	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.07	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	14.7	14.7	< 0.005	< 0.005	—	14.8
Demolition	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	< 0.005	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.44	2.44	< 0.005	< 0.005	—	2.45
Demolition	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.03	0.44	0.00	0.00	0.16	0.16	0.00	0.04	0.04	—	137	137	< 0.005	0.01	0.01	139
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.39	0.39	< 0.005	< 0.005	< 0.005	0.39
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.06	0.06	< 0.005	< 0.005	< 0.005	0.06
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.11. Phase 4B-2a (2036) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.06	0.05	4.07	0.40	0.04	0.09	1.85	1.94	0.09	0.51	0.60	—	4,989	4,989	< 0.005	0.80	5.35	5,232
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.05	0.05	4.30	0.40	0.04	0.09	1.85	1.94	0.09	0.51	0.60	—	4,990	4,990	< 0.005	0.80	0.14	5,227
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	0.01	0.95	0.09	0.01	0.02	0.40	0.42	0.02	0.11	0.13	—	1,094	1,094	< 0.005	0.17	0.51	1,146
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.17	0.02	< 0.005	< 0.005	0.07	0.08	< 0.005	0.02	0.02	—	181	181	< 0.005	0.03	0.08	190

3.13. Phase 4B-2a (2037) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.06	0.05	4.03	0.40	0.04	0.09	1.85	1.94	0.09	0.51	0.60	—	4,923	4,923	< 0.005	0.80	4.70	5,165

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.05	0.05	4.22	0.40	0.04	0.09	1.85	1.94	0.09	0.51	0.60	—	4,923	4,923	< 0.005	0.80	0.12	5,161
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.02	0.02	1.41	0.13	0.01	0.03	0.60	0.63	0.03	0.17	0.19	—	1,618	1,618	< 0.005	0.26	0.67	1,697
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.26	0.02	< 0.005	0.01	0.11	0.12	0.01	0.03	0.04	—	268	268	< 0.005	0.04	0.11	281

3.15. Phase 4A-3 (2035) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.08	0.43	4.32	0.01	0.02	—	0.02	0.02	—	0.02	—	879	879	0.04	0.01	—	882

Dust From Material Movement	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.05	0.54	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	110	110	< 0.005	< 0.005	—	111
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.10	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	18.2	18.2	< 0.005	< 0.005	—	18.3
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.18	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	55.0	55.0	< 0.005	< 0.005	< 0.005	55.7
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.12	0.12	8.13	1.13	0.08	0.15	3.24	3.40	0.15	0.89	1.04	—	8,937	8,937	< 0.005	1.40	0.28	9,355

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.08	7.08	< 0.005	< 0.005	0.01	7.17
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.02	0.02	1.02	0.14	0.01	0.02	0.40	0.42	0.02	0.11	0.13	—	1,119	1,119	< 0.005	0.18	0.57	1,172
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.17	1.17	< 0.005	< 0.005	< 0.005	1.19
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.19	0.03	< 0.005	< 0.005	0.07	0.08	< 0.005	0.02	0.02	—	185	185	< 0.005	0.03	0.10	194

3.17. Phase 4A-3 (2036) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.08	0.43	4.32	0.01	0.02	—	0.02	0.02	—	0.02	—	879	879	0.04	0.01	—	882
Dust From Material Movement	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.08	0.43	4.32	0.01	0.02	—	0.02	0.02	—	0.02	—	879	879	0.04	0.01	—	882

Dust From Material Movement	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.04	0.21	2.15	< 0.005	0.01	—	0.01	0.01	—	0.01	—	437	437	0.02	< 0.005	—	439
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.04	0.39	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	72.4	72.4	< 0.005	< 0.005	—	72.6
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.01	0.25	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	61.0	61.0	< 0.005	< 0.005	0.09	61.2
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.13	0.12	7.61	1.12	0.08	0.15	3.24	3.40	0.15	0.89	1.04	—	8,787	8,787	< 0.005	1.40	9.36	9,215
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.01	0.01	0.01	0.17	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	54.4	54.4	< 0.005	< 0.005	< 0.005	54.5
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.13	0.12	8.05	1.14	0.08	0.15	3.24	3.40	0.15	0.89	1.04	—	8,790	8,790	< 0.005	1.40	0.24	9,209
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.09	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	27.8	27.8	< 0.005	< 0.005	0.02	28.2
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.06	0.06	4.02	0.56	0.04	0.08	1.60	1.68	0.08	0.44	0.52	—	4,368	4,368	< 0.005	0.70	2.01	4,578
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	4.60	4.60	< 0.005	< 0.005	< 0.005	4.66
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	0.01	0.73	0.10	0.01	0.01	0.29	0.31	0.01	0.08	0.09	—	723	723	< 0.005	0.12	0.33	758

3.19. Phase 4B-1 (2036) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.18	0.18	0.95	9.77	0.02	0.04	—	0.04	0.04	—	0.04	—	1,938	1,938	0.08	0.02	—	1,944
Dust From Material Movement	—	—	—	—	—	—	1.66	1.66	—	0.83	0.83	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.18	0.18	0.95	9.77	0.02	0.04	—	0.04	0.04	—	0.04	—	1,938	1,938	0.08	0.02	—	1,944
Dust From Material Movement	—	—	—	—	—	—	1.66	1.66	—	0.83	0.83	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.04	0.21	2.14	< 0.005	0.01	—	0.01	0.01	—	0.01	—	425	425	0.02	< 0.005	—	426
Dust From Material Movement	—	—	—	—	—	—	0.36	0.36	—	0.18	0.18	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.04	0.39	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	70.3	70.3	< 0.005	< 0.005	—	70.6
Dust From Material Movement	—	—	—	—	—	—	0.07	0.07	—	0.03	0.03	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.02	0.49	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	122	122	< 0.005	< 0.005	0.19	122
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.05	0.05	3.04	0.45	0.03	0.06	1.30	1.36	0.06	0.36	0.42	—	3,515	3,515	< 0.005	0.56	3.74	3,686

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.02	0.33	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	109	109	< 0.005	< 0.005	< 0.005	109
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.05	0.05	3.22	0.46	0.03	0.06	1.30	1.36	0.06	0.36	0.42	—	3,516	3,516	< 0.005	0.56	0.10	3,683
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.08	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	24.5	24.5	< 0.005	< 0.005	0.02	24.8
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	0.01	0.71	0.10	0.01	0.01	0.28	0.30	0.01	0.08	0.09	—	771	771	< 0.005	0.12	0.35	808
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	4.06	4.06	< 0.005	< 0.005	< 0.005	4.11
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.13	0.02	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.02	—	128	128	< 0.005	0.02	0.06	134

3.21. Phase 4B-1 (2037) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.18	0.18	0.95	9.77	0.02	0.04	—	0.04	0.04	—	0.04	—	1,938	1,938	0.08	0.02	—	1,944
Dust From Material Movement	—	—	—	—	—	—	1.66	1.66	—	0.83	0.83	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.18	0.18	0.95	9.77	0.02	0.04	—	0.04	0.04	—	0.04	—	1,938	1,938	0.08	0.02	—	1,944
Dust From Material Movement	—	—	—	—	—	—	1.66	1.66	—	0.83	0.83	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	0.06	0.31	3.21	0.01	0.01	—	0.01	0.01	—	0.01	—	637	637	0.03	0.01	—	639
Dust From Material Movement	—	—	—	—	—	—	0.55	0.55	—	0.27	0.27	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.06	0.59	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	105	105	< 0.005	< 0.005	—	106
Dust From Material Movement	—	—	—	—	—	—	0.10	0.10	—	0.05	0.05	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.02	0.47	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	121	121	< 0.005	< 0.005	0.16	121

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.05	0.05	3.01	0.45	0.03	0.06	1.30	1.36	0.06	0.36	0.42	—	3,468	3,468	< 0.005	0.56	3.29	3,639
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.02	0.31	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	108	108	< 0.005	< 0.005	< 0.005	108
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.05	0.05	3.16	0.46	0.03	0.06	1.30	1.36	0.06	0.36	0.42	—	3,469	3,469	< 0.005	0.56	0.09	3,637
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.12	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	36.4	36.4	< 0.005	< 0.005	0.02	36.5
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.02	0.02	1.05	0.15	0.01	0.02	0.42	0.44	0.02	0.12	0.14	—	1,140	1,140	< 0.005	0.18	0.47	1,196
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	6.02	6.02	< 0.005	< 0.005	< 0.005	6.04
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.19	0.03	< 0.005	< 0.005	0.08	0.08	< 0.005	0.02	0.02	—	189	189	< 0.005	0.03	0.08	198

3.23. Phase 4B-2b (2037) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.08	0.40	4.29	0.01	0.02	—	0.02	0.02	—	0.02	—	818	818	0.03	0.01	—	821

Dust From Material Movement	—	—	—	—	—	—	0.70	0.70	—	0.34	0.34	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.04	0.47	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	89.7	89.7	< 0.005	< 0.005	—	90.0
Dust From Material Movement	—	—	—	—	—	—	0.08	0.08	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.09	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	14.8	14.8	< 0.005	< 0.005	—	14.9
Dust From Material Movement	—	—	—	—	—	—	0.01	0.01	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.35	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	90.6	90.6	< 0.005	< 0.005	0.12	90.9
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.13	0.12	7.53	1.12	0.08	0.15	3.24	3.40	0.15	0.89	1.04	—	8,671	8,671	< 0.005	1.40	8.22	9,097

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	9.09	9.09	< 0.005	< 0.005	0.01	9.12
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	0.01	0.88	0.12	0.01	0.02	0.35	0.37	0.02	0.10	0.11	—	950	950	< 0.005	0.15	0.39	997
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.51	1.51	< 0.005	< 0.005	< 0.005	1.51
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.16	0.02	< 0.005	< 0.005	0.06	0.07	< 0.005	0.02	0.02	—	157	157	< 0.005	0.03	0.06	165

3.25. Phase 4C (2037) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.15	0.80	8.04	0.02	0.03	—	0.03	0.03	—	0.03	—	1,630	1,630	0.07	0.01	—	1,635
Dust From Material Movement	—	—	—	—	—	—	0.09	0.09	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.15	0.15	0.80	8.04	0.02	0.03	—	0.03	0.03	—	0.03	—	1,630	1,630	0.07	0.01	—	1,635
Dust From Material Movement	—	—	—	—	—	—	0.09	0.09	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.10	0.97	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	196	196	0.01	< 0.005	—	197
Dust From Material Movement	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.18	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	32.5	32.5	< 0.005	< 0.005	—	32.6
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.35	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	90.6	90.6	< 0.005	< 0.005	0.12	90.9
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.07	0.06	3.76	0.56	0.04	0.08	1.62	1.70	0.08	0.44	0.52	—	4,335	4,335	< 0.005	0.70	4.11	4,549

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.24	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	80.7	80.7	< 0.005	< 0.005	< 0.005	80.9
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.06	0.06	3.95	0.57	0.04	0.08	1.62	1.70	0.08	0.44	0.52	—	4,337	4,337	< 0.005	0.70	0.11	4,546
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	10.00	10.00	< 0.005	< 0.005	0.01	10.0
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	0.01	0.48	0.07	< 0.005	0.01	0.19	0.20	0.01	0.05	0.06	—	523	523	< 0.005	0.08	0.21	548
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.66	1.66	< 0.005	< 0.005	< 0.005	1.66
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.09	0.01	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	86.5	86.5	< 0.005	0.01	0.04	90.7

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Phase 2	Demolition	9/4/2034	2/16/2035	5.00	120	Demolition of Structures
Phase 4A-1	Demolition	2/19/2035	6/22/2035	5.00	90.0	Concrete Demolition Slab
Phase 4A-2	Demolition	6/25/2035	10/26/2035	5.00	90.0	Concrete Demolition Foundation
Phase 3	Demolition	2/17/2035	2/17/2035	6.00	1.00	Shipping
Phase 4B-2a	Site Preparation	9/11/2036	6/17/2037	5.00	200	Contaminated Soil Export
Phase 4A-3	Site Preparation	10/29/2035	9/10/2036	5.00	228	Haul Crushed Concrete
Phase 4B-1	Grading	9/11/2036	6/17/2037	5.00	200	Clean Soil Import Export Regrading

Phase 4B-2b	Grading	6/18/2037	8/12/2037	5.00	40.0	Soil Import Remaining Clean Soil
Phase 4C	Grading	8/13/2037	10/13/2037	5.00	44.0	Export Remaining Crushed Concrete Import Gravel Regrade

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Phase 2	Other General Industrial Equipment	Diesel	Tier 4 Final	1.00	6.00	480	0.34
Phase 2	Off-Highway Trucks	Diesel	Tier 4 Final	1.00	2.00	598	0.38
Phase 2	Other General Industrial Equipment	Electric	Average	1.00	6.00	400	0.34
Phase 2	Other Material Handling Equipment	Diesel	Tier 4 Final	1.00	6.00	560	0.40
Phase 2	Cranes	Diesel	Tier 4 Final	1.00	4.00	270	0.29
Phase 2	Cranes	Diesel	Tier 4 Final	1.00	4.00	350	0.29
Phase 2	Rubber Tired Loaders	Diesel	Tier 4 Final	1.00	2.00	232	0.36
Phase 2	Aerial Lifts	Electric	Average	3.00	6.00	46.0	0.31
Phase 2	Off-Highway Trucks	Diesel	Tier 4 Final	1.00	2.00	444	0.38
Phase 2	Forklifts	Electric	Average	6.00	4.00	82.0	0.20
Phase 4A-1	Other Construction Equipment	Diesel	Tier 4 Final	1.00	6.00	456	0.42
Phase 4A-1	Other Construction Equipment	Diesel	Tier 4 Final	1.00	11.0	480	0.42
Phase 4A-1	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	1.00	8.00	527	0.37
Phase 4A-1	Off-Highway Trucks	Diesel	Tier 4 Final	1.00	2.00	444	0.38

Phase 4A-2	Other Construction Equipment	Diesel	Tier 4 Final	1.00	6.00	456	0.42
Phase 4A-2	Other Construction Equipment	Diesel	Tier 4 Final	1.00	2.00	480	0.42
Phase 4A-2	Other Construction Equipment	Diesel	Tier 4 Final	1.00	9.00	480	0.42
Phase 4A-2	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	1.00	6.00	527	0.37
Phase 4A-2	Off-Highway Trucks	Diesel	Tier 4 Final	1.00	2.00	444	0.38
Phase 3	Cranes	Electric	Average	1.00	7.00	1,007	0.29
Phase 3	Off-Highway Trucks	Diesel	Tier 4 Final	2.00	7.00	598	0.38
Phase 3	Other Material Handling Equipment	Diesel	Tier 4 Final	1.00	7.00	390	0.40
Phase 3	Off-Highway Trucks	Diesel	Tier 4 Final	1.00	2.00	444	0.38
Phase 4A-3	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	1.00	3.00	527	0.37
Phase 4A-3	Off-Highway Trucks	Diesel	Tier 4 Final	1.00	1.00	444	0.38
Phase 4B-1	Rubber Tired Dozers	Diesel	Tier 4 Final	1.00	5.00	310	0.40
Phase 4B-1	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	1.00	3.00	527	0.37
Phase 4B-1	Off-Highway Trucks	Diesel	Tier 4 Final	1.00	2.00	444	0.38
Phase 4B-1	Graders	Diesel	Tier 4 Final	1.00	2.00	139	0.41
Phase 4B-2b	Graders	Diesel	Tier 4 Final	1.00	2.00	139	0.41
Phase 4B-2b	Rubber Tired Dozers	Diesel	Tier 4 Final	1.00	2.00	310	0.40
Phase 4B-2b	Off-Highway Trucks	Diesel	Tier 4 Final	1.00	2.00	444	0.38
Phase 4C	Graders	Diesel	Tier 4 Final	1.00	3.00	527	0.41
Phase 4C	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	1.00	3.00	527	0.37
Phase 4C	Off-Highway Trucks	Diesel	Tier 4 Final	1.00	1.00	444	0.38

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Phase 2	—	—	—	—
Phase 2	Worker	42.5	18.5	LDA,LDT1,LDT2
Phase 2	Vendor	—	10.2	HHDT,MHDT
Phase 2	Hauling	0.00	20.0	HHDT
Phase 2	Onsite truck	—	—	HHDT
Phase 4A-1	—	—	—	—
Phase 4A-1	Worker	10.0	18.5	LDA,LDT1,LDT2
Phase 4A-1	Vendor	—	10.2	HHDT,MHDT
Phase 4A-1	Hauling	0.00	20.0	HHDT
Phase 4A-1	Onsite truck	—	—	HHDT
Phase 4A-2	—	—	—	—
Phase 4A-2	Worker	12.5	18.5	LDA,LDT1,LDT2
Phase 4A-2	Vendor	—	10.2	HHDT,MHDT
Phase 4A-2	Hauling	0.00	20.0	HHDT
Phase 4A-2	Onsite truck	—	—	HHDT
Phase 4B-1	—	—	—	—
Phase 4B-1	Worker	10.0	18.5	LDA,LDT1,LDT2
Phase 4B-1	Vendor	—	10.2	HHDT,MHDT
Phase 4B-1	Hauling	20.0	70.0	HHDT
Phase 4B-1	Onsite truck	—	—	HHDT
Phase 3	—	—	—	—
Phase 3	Worker	12.5	18.5	LDA,LDT1,LDT2
Phase 3	Vendor	—	10.2	HHDT,MHDT

Phase 3	Hauling	0.00	20.0	HHDT
Phase 3	Onsite truck	—	—	HHDT
Phase 4B-2a	—	—	—	—
Phase 4B-2a	Worker	0.00	18.5	LDA,LDT1,LDT2
Phase 4B-2a	Vendor	—	10.2	HHDT,MHDT
Phase 4B-2a	Hauling	10.0	200	HHDT
Phase 4B-2a	Onsite truck	—	—	HHDT
Phase 4A-3	—	—	—	—
Phase 4A-3	Worker	5.00	18.5	LDA,LDT1,LDT2
Phase 4A-3	Vendor	—	10.2	HHDT,MHDT
Phase 4A-3	Hauling	50.0	70.0	HHDT
Phase 4A-3	Onsite truck	—	—	HHDT
Phase 4B-2b	—	—	—	—
Phase 4B-2b	Worker	7.50	18.5	LDA,LDT1,LDT2
Phase 4B-2b	Vendor	—	10.2	HHDT,MHDT
Phase 4B-2b	Hauling	50.0	70.0	HHDT
Phase 4B-2b	Onsite truck	—	—	HHDT
Phase 4C	—	—	—	—
Phase 4C	Worker	7.50	18.5	LDA,LDT1,LDT2
Phase 4C	Vendor	—	10.2	HHDT,MHDT
Phase 4C	Hauling	25.0	70.0	HHDT
Phase 4C	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Control Strategies Applied	PM10 Reduction	PM2.5 Reduction

Water unpaved roads twice daily	55%	55%
Limit vehicle speeds on unpaved roads to 25 mph	44%	44%

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (Cubic Yards)	Material Exported (Cubic Yards)	Acres Graded (acres)	Material Demolished (Ton of Debris)	Acres Paved (acres)
Phase 2	0.00	0.00	0.00	0.00	—
Phase 4A-1	0.00	0.00	0.00	97,087	—
Phase 4A-2	0.00	0.00	0.00	40,453	—
Phase 3	0.00	0.00	0.00	—	—
Phase 4B-2a	—	10,000	17.5	0.00	—
Phase 4A-3	—	57,000	0.00	0.00	—
Phase 4B-1	40,000	40,000	62.5	0.00	—
Phase 4B-2b	10,000	—	10.0	0.00	—
Phase 4C	11,000	11,000	8.25	0.00	—

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	2	61%	61%
Water Demolished Area	2	36%	36%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
General Heavy Industry	0.00	0%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2034	1,093	690	0.05	0.01
2035	2,618	690	0.05	0.01
2036	0.00	690	0.05	0.01
2037	0.00	690	0.05	0.01

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

8. User Changes to Default Data

Screen	Justification
Characteristics: Project Details	Provided by SAR.
Land Use	Structures would be demolished. No building construction.
Construction: Construction Phases	Provided by SAR.
Construction: Off-Road Equipment	Provided by SAR.
Construction: On-Road Fugitive Dust	Phase 2 activities will occur on existing concrete slab that covers the whole facility. Activities starting in Phase 4A-1 will remove the concrete slab and occur over unpaved areas.
Construction: Trips and VMT	Provided by SAR: based on 10 cyd trucks.
Construction: Dust From Material Movement	Provided by SAR.

Table A-56.

Comparison of Project to 1995 EIR, Peak Daily Operational Emissions (lb/day)

	PM10	PM2.5	NOX	SOX	CO	VOC	Annual CO2e (mton/yr)
1995 EIR Proposed Project							
Fugitive Emissions							
Wind Errosion from Storage Piles	6						
Material Movement with Heavy Duty Equipment (Dozers)	66						
Material Dumping into Piles	5.6						
Bulkloader	0.4						
Truck and Mobile Equipment Dust	80						
Fuel Storage Tanks						2	
Point Source Emissions							
Auto Shredder/Cyclones (2)	3					443	
Electricity	0		6	1	1	0	
Mobile Source Equipment Exhaust Emissions							
On-site Mobile Equipment	142		2,332	216	1,014	238	
Ship Emissions	129		703	1,058	264	77	
Trucks (Delivery)	22		177	15	637	59	
Trucks (Shipping)	1		5	0	17	2	
Employee Vehicles	1		12	1	165	15	
Locomotives	2		89	4	3	2	
1995 EIR Project Total	458		3,324	1,296	2,101	838	
1995 EIR Existing Conditions Total	347		2,378	1,213	1,533	581	
1995 EIR CEQA Increment	*111*		*946*	*83*	*568*	*257*	
SCAQMD Threshold	*150*		*55*	*150*	*550*	*55*	
CEQA Significant Impact?	*No*		*Yes*	*No*	*Yes*	*Yes*	
2021/2022 Baseline							
Vessels	14	13	1,440	39	97	26	3,781
Tugboats	2	1	54	0	37	3	95
Trucks	11	4	186	1	33	4	9,751
Rail	0	0	6	0	2	0	83
Onsite Equipment	29	5	87	0	268	6	4,374
Worker Vehicles	1	0	1	0	17	1	615
Indirect Emissions							4,015
2021/2022 Baseline	*57*	*24*	*1,774*	*40*	*454*	*40*	*22,714*
Proposed Project - Phase 1							
Vessels	14	13	1,440	39	97	26	3,781
Tugboats	2	1	54	0	37	3	95
Trucks	10	3	89	1	12	1	9,734
Rail	0	0	6	0	2	0	83
Onsite Equipment	29	5	87	0	268	6	4,374
Worker Vehicles	1	0	1	0	15	1	591
Indirect Emissions							4,015
Proposed Project - Phase 1 Total	56	24	1,677	40	432	36	22,673

Source:

1995 DEIR and FEIR

Fugitive Emissions are from 1995 DEIR Table 3.3-10.

Point Source Emissions are from 1995 DEIR Table 3.3.-11.

Mobile Source Emissions are from 1995 DEIR Table 3.3.-12.

Total Project Emissions are from 1995 DEIR Table 3.3.-13.

Existing Conditions are from 1995 DEIR Corrections Table 3.3-7.

CEQA Increment Emissions are from 1995 DEIR Table 3.3-13 prior to mitigation; mitigated emissions were not presented in the 1995 EIR. Significance determination is from 1995 EIR, Secti

2021/2022 Baseline and Proposed Project emissions were calculated.

Notes:

There was no requirement to quantify PM2.5 in CEQA analyses at the time of the 1995 EIR.

Appendix C

Cultural Records Search Bibliography

Report List

14621.02 SA Recycling Project

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
LA-02399		1978	Winman, Lois J. and E. Gary Stickel	Los Angeles-long Beach Harbor Areas Cultural Resource Survey.		19-167246, 19-167265, 19-167266, 19-167267, 19-174912, 19-176737, 19-186116, 19-186554
LA-03043		1994	Hector, Susan M., William R. Manley, and Martin Rosen	Historic and Archaeological Resources Protection (harp) Plan for Naval Station Long Beach (navsta)	Broken Fragments	19-000283
LA-03341		1994	Komporlides, Dena S.	Cultural Resources Evaluation for Site 6-a, Long Beach Naval Station, California	Tetra Tech, Inc.	
LA-03707		1974	Clewlow, C. William Jr.	Preliminary Report of the Potential Impact on Archaeological Resources of the Proposed Gas Transmission Pipeline From Los Angeles Harbor to Yorba Linda - Southern California Gas Co.: Environmental Analysis	University of California, Los Angeles Archaeological Survey	30-000277
LA-04455		1980	Pierson, Larry J.	A Cultural Resource Study for the Los Angeles Harbor Deepening Project	U.S. Army, Los Angeles District Corps	
LA-04970		2000	Smith, C. Philomene	Reconstruction Along Route 47 From the Vincent Thomas Toll Plaza to Navy Way	Caltrans District 7	
LA-10858		2007	Robinson, Mark	Final SR-47 Flyover Considered part of the Schuyler Heim Bridge Replacement and SR-47 Expressway Project - Supplemental Historic Property Survey Report Archaeological Survey Report	Jones 7 Stokes	
LA-12389		2012	Chasteen, Carrie	Identification and Evaluation of Smokehouses Port of Long Beach Long Beach, Los Angeles County, California	Parsons	19-190588

Report List

14621.02 SA Recycling Project

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
LA-12808		2014	Chasteen, Carrie, Clark, Tiffany, Hanes, Richard, and Mirro, Michael	Cultural Resources Study of the Wilmington Oil and Gas Field, Los Angeles County, California in Support of Analysis of Oil and Gas Well Stimulation Treatments in California Environmental Impact Report	Applied EarthWorks	19-000098, 19-000148, 19-000693, 19-000694, 19-002135, 19-002208, 19-002660, 19-002788, 19-002850, 19-004279, 19-004313, 19-004325, 19-150149, 19-150150, 19-150151, 19-150152, 19-150153, 19-150154, 19-150155, 19-150156, 19-150157, 19-150158, 19-150159, 19-150160, 19-150161, 19-150162, 19-150163, 19-150164, 19-150165, 19-150166, 19-150167, 19-150168, 19-150169, 19-150170, 19-150171, 19-150172, 19-150173, 19-150174, 19-150175, 19-150176, 19-150177, 19-150178, 19-150179, 19-150180, 19-150181, 19-150182, 19-150183, 19-150184, 19-150185, 19-150186, 19-150187, 19-150188, 19-150189, 19-150190, 19-150192, 19-150260, 19-150261, 19-150262, 19-150263, 19-150264, 19-150265, 19-150266, 19-150267, 19-150268, 19-150269, 19-150270, 19-150271, 19-150272, 19-150273, 19-150274, 19-150275, 19-150276, 19-150277, 19-150278, 19-150279, 19-150280, 19-150281, 19-150282, 19-150283, 19-150284, 19-150285, 19-150286, 19-150287, 19-150288, 19-150289, 19-150290, 19-150291, 19-150293, 19-150345, 19-150346, 19-150347, 19-150348, 19-150349, 19-150350, 19-150351, 19-150352, 19-150353, 19-150354, 19-150355, 19-150356, 19-150357, 19-150358, 19-150362, 19-150394, 19-150395, 19-167294, 19-167314, 19-175277, 19-176737, 19-178682, 19-178683, 19-178689, 19-178693, 19-178699, 19-178702, 19-178703, 19-178955, 19-178967, 19-180734, 19-180784, 19-186116, 19-186672, 19-186745, 19-186752, 19-186992, 19-187005, 19-187016, 19-187017, 19-187020, 19-187021, 19-187022, 19-187023, 19-187024, 19-187051, 19-187078, 19-187085, 19-187089, 19-187096,

Report List

14621.02 SA Recycling Project

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
						19-187097, 19-187116, 19-187121, 19-187124, 19-187125, 19-187126, 19-187127, 19-187128, 19-187129, 19-187131, 19-187134, 19-187144, 19-187148, 19-187163, 19-187165, 19-187166, 19-187167, 19-187168, 19-187169, 19-187171, 19-187172, 19-187174, 19-187178, 19-187179, 19-187182, 19-187185, 19-187187, 19-187188, 19-187189, 19-187190, 19-187193, 19-187194, 19-187197, 19-187198, 19-187199, 19-187200, 19-187201, 19-187202, 19-187206, 19-187210, 19-187211, 19-187214, 19-187216, 19-187217, 19-187218, 19-187221, 19-187223, 19-187225, 19-187226, 19-187227, 19-187229, 19-187230, 19-187231, 19-187232, 19-187236, 19-187239, 19-187240, 19-187243, 19-187246, 19-187247, 19-187249, 19-187250, 19-187252, 19-187287, 19-187288, 19-187289, 19-187292, 19-187295, 19-187296, 19-187297, 19-187300, 19-187301, 19-187302, 19-187303, 19-187304, 19-187305, 19-187312, 19-187314, 19-187315, 19-187641, 19-187642, 19-187643, 19-187644, 19-187645, 19-187646, 19-187647, 19-187648, 19-187649, 19-187650, 19-187651, 19-187652, 19-187654, 19-187682, 19-187683, 19-187684, 19-187685, 19-187686, 19-187957, 19-187958, 19-187971, 19-188092, 19-188178, 19-188198, 19-188201, 19-188776, 19-188864, 19-188865, 19-188866, 19-188867, 19-188906, 19-189318, 19-189426, 19-189874, 19-190040, 19-190079, 19-190080, 19-190096, 19-190103, 19-190105, 19-190107, 19-190108, 19-190109, 19-190112, 19-190321, 19-190327, 19-190588, 19-190597, 19-190598, 19-190670

Resource List

SA Recycling Project

Primary No.	Trinomial	Other IDs	Type	Age	Attribute codes	Recorded by	Reports
P-19-150271		Resource Name - Temporary Barracks; Other - Long Beach Naval Station	Building	Historic	HP14; HP34	1992 (K. Crawford, Ogden Environmental)	LA-04132, LA-12808
P-19-150280		OHP Property Number - 068319; Resource Name - Marine Barracks; Other - Long Beach Naval Station; Other - Bldg 81/Storage	Building	Historic	HP14; HP34	1992 (K. Crawford, Ogden Environmental)	LA-04132, LA-12808
P-19-167314		OHP Property Number - 068807; Resource Name - Terminal Island; Other - East San Pedro; Other - Rattlesnake Island	District	Historic	HP39	1979 (K. Fijita, Ethnic Minority Cultural Resources)	LA-11226, LA-11811, LA-12227, LA-12808
P-19-173042		OHP Property Number - 027064; Resource Name - Ferry Boat Sierra Nevada; Other - Propulsion System	Structure	Historic			LA-11226, LA-11811

Appendix D

Updated Department of Parks and Recreation Reports

State of California ♦ Natural Resources Agency
DEPARTMENT OF PARKS AND RECREATION

Primary# _____
HRI # _____
Trinomial _____
NRHP Status Code 6Z

UPDATE SHEET

Property Name: SA Recycling

Page 1 **of** 10 ***Resource Name or #:** (Assigned by recorder) SA Recycling

P1. Other Identifier: 901 New Dock St, Los Angeles, CA 90731 / Berths 210 and 211

*__P2.__ **Location:** ☐ **Not for Publication** ■ **Unrestricted**

***a. County** Los Angeles **and** (P2c, P2e, and P2b or P2d. Attach a Location Map as necessary.)

b. USGS 7.5' Quad San Bernardino **Date** 2013 **T** 5S; **R** 13W; __**of** __ **of Sec** 9; San Bernardino **B.M.**

c. Address 901 New Dock Street City Los Angeles Zip 90731

d. UTM: (Give more than one for large and/or linear resources) Zone 11N , 384133 mE/ 3736057 mN

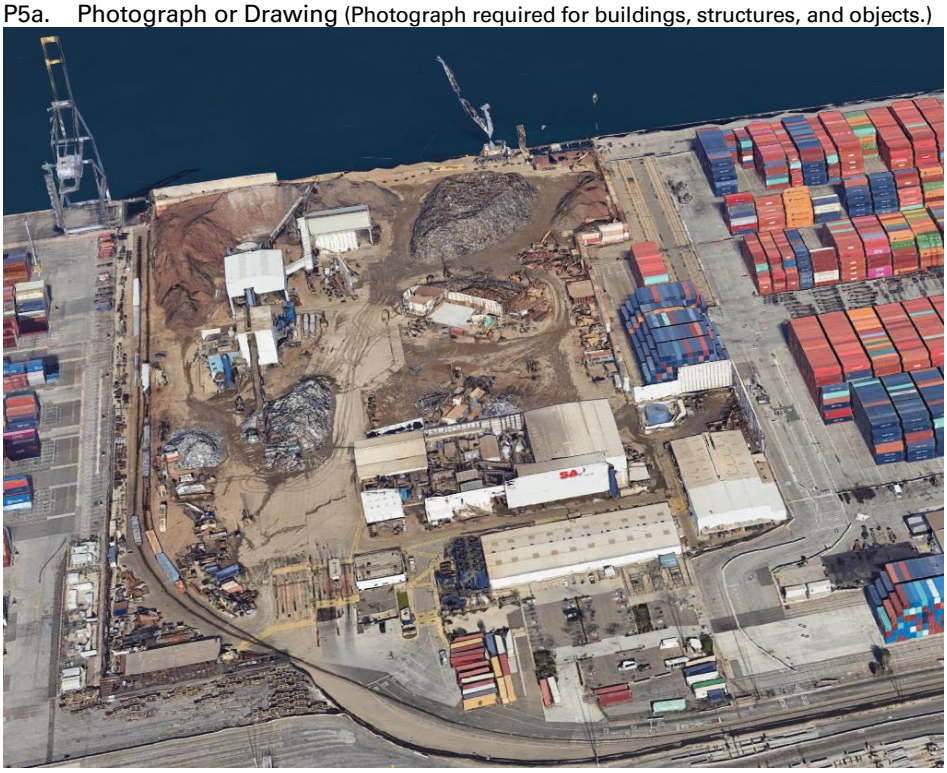
e. Other Locational Data: (e.g., parcel #, directions to resource, elevation, decimal degrees, etc., as appropriate)
AIN 7440-013-907; 7440-012-902; 7440-020-908; and 7440-021-91/Terminal Island

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)

The purpose of this DPR update is to supplement previous recordation and evaluation efforts conducted for SA Recycling (subject property) completed by SWCA Environmental Consultants in 2011, which found the subject property ineligible for the National Register of Historic Places (NRHP) and the California Register of Historical Resources (CRHR). This DPR update provides updated photographs of SA Recycling, noting and changes since the SWCA 2011 evaluation, and provides an evaluation of the property under Los Angeles Historic Cultural Monument (LAHCM) criteria. As the history of the property has been thoroughly documented already, this DPR is limited to updating pertinent information and providing an evaluation under local criteria. Previous DPR forms are attached to this DPR form set. [See Continuation Sheet]

***P3b. Resource Attributes:** (List attributes and codes) HP8. Industrial building

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)



***P4. Resources Present:**
■ Building ☐ Structure ☐ Object
■ Site ☐ District ☐ Element of District
☐ Other (Isolates, etc.)

P5b. Description of Photo: (view, date, accession #) Photograph 1. Overview of the SA Recycling facility, Google Earth (2022)

***P6. Date Constructed/Age and Source:** ■ Historic ☐ Prehistoric ☐ Both
1962 (SWCA 2011: 1)

***P7. Owner and Address:**
Los Angeles Harbor Department
425 South Palos Verdes Street
San Pedro, CA 90733-0151

***P8. Recorded by:** (Name, affiliation, and address)
Claire Cancilla, MSHP
Dudek, 38 N Marengo Avenue,
Pasadena, CA 91101

***P9. Date Recorded:** 08/03/2023

***P10. Survey Type:** (Describe)
Intensive

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.")
Dudek. 2023. Subsequent Environmental Impact Report to the Hugo Neu-Proler Lease Renewal Environmental Impact Report. Prepared for the Los Angeles Harbor Department. August 2023.

***Attachments:** ☐NONE ■Location Map ■Continuation Sheet ■Building, Structure, and Object Record
☐Archaeological Record ☐District Record ☐Linear Feature Record ☐Milling Station Record ☐Rock Art Record

State of California - The Resources Agency DEPARTMENT OF PARKS AND RECREATION **LOCATION MAP**	Primary # HRI# Trinomial

Page 2 **of** 10 ***Resource Name or #** (Assigned by recorder) SA Recycling

***Map Name:** San Bernardino Base, CA ***Scale:** 1:24,000 ***Date of map:** 2013

B1. Historic Name: Hugo Neu-Proler Scrap Metal
B2. Common Name: SA Recycling
B3. Original Use: Scrap metal recycling B4. Present Use: Scrap metal recycling
***B5. Architectural Style:** Industrial, utilitarian
***B6. Construction History:** (Construction date, alterations, and date of alterations)

The SA Recycling facility was founded in 1962 and has expanded with the addition of new buildings and machinery in the succeeding decades. See **Continuation Sheet** for an alterations list based on previous documentation and current on-site observation.

***B7. Moved?** ☒**No** ☐**Yes** ☐**Unknown** **Date:** _____ **Original Location:**_____
***B8. Related Features:**
N/A

B9a. Architect: None b. Builder: Unknown
***B10. Significance: Theme** N/A **Area** Port of Los Angeles **Period of Significance** N/A **Property Type** Recycling Plant **Applicable Criteria** N/A (Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity.)

Significance summary

The SA Recycling facility was previously evaluated by SWCA in 2011 and found ineligible for the NRHP and CRHR under Criteria A/1, B/2, C/3, and D/4 due to a lack of significant associations and architectural merit. SWCA's 2011 DPR is attached to the back of this DPR form set. To update this evaluation, Dudek reviewed SWCA's 2011 recommendation that the property does not meet NRHP or CRHR Criteria requirements. Dudek concurs with this finding. However, SWCA's DPR did not include a full assessment of the property site under Los Angeles Historic Cultural Monument (LAHCM) criteria, other than the statement "the property does not appear eligible for local designation" (SWCA 2011: 5). Because the DPR form was prepared over five years ago and did not include a detailed evaluation under local criteria, it requires updating in accordance with current professional standards. Dudek's updated evaluation of SA Recycling found the subject property ineligible under LAHCM Criteria 1, 2, and 3. [**See Continuation Sheet for full evaluation**]

B11. Additional Resource Attributes: (List attributes and codes)
N/A

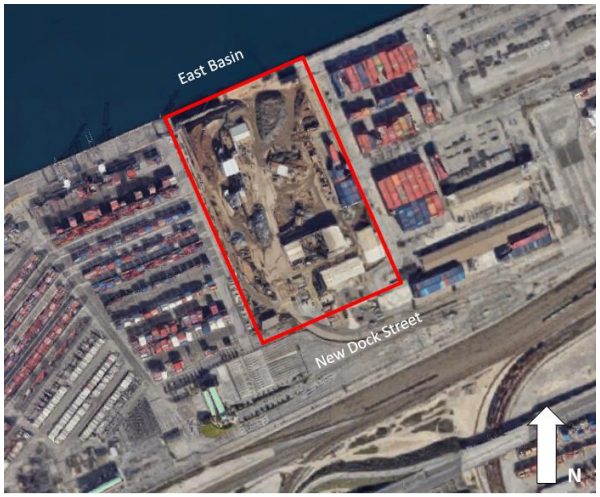
***B12. References:**

See **Continuation Sheet** for full list of references.

B13. Remarks:

***B14. Evaluator:** Claire Cancilla, MSHP

(Sketch Map with north arrow required.)



***P3a. Description:**

SA Recycling is located on the north side of Terminal Island on a 26.7-acre site. The subject property has been described extensively in past documentation. Dudek's intensive level survey of the site on August 3, 2023 and review of aerial photographs from 2009 to 2023 did not identify significant changes to the site since the 2011 description of the site, other than possible replacement of corrugated metal siding and other updates that are typical of an active industrial site. For a detailed description of the SA Recycling site see the 2011 SWCA DPR attached (SWCA 2011: 1 and 5). Photographs 2 through 8 show existing building and structure conditions.

Photograph 2. Oblique view of the primary (south) and east elevations of the main office, constructed in 1962. View to the west. Photograph taken on 08/03/2023.

Source: Dudek IMG

Photograph 3. South elevation of the non-ferrous separation building, view to the northeast. Photograph taken on 08/03/2023.

Source: Dudek IMG

Photograph 4. North elevation of the warehouse, view to the south. Photograph taken on 08/03/2023.

Source: Dudek

Photograph 5. West elevation of the shop and locker rooms, view to the east. Photograph taken on 08/03/2023.

Source: Dudek

Photograph 6. West side of the ferrous shear, view to the northeast. Photograph taken on 08/03/2023.

Source: Dudek

Photograph 7. Shredder, located to the northwest of the SA Recycling site. View to the north. Photograph taken on 08/03/2023.

Source: Dudek

Photograph 8. Wall at the northwestern boundary of the SA Recycling site, view to the southwest. Photograph taken on 08/03/2023.

Source: Dudek

*B6. Construction History *(continued from page 2):*

The following list of alterations to the property were included in the 2011 DPR form completed by SWCA Environmental Consultants (SWCA 2011: 3). Based on Dudek's review of historic aerial photographs of the site from 2009 to 2023, as well as physical inspection during the intensive survey on August 3, 2023, Dudek did not observe additional major alterations or changes to the site, other than typical replacement of building cladding, fenestration, and machinery that routinely occurs at an active industrial site (NETR 2023). The SA Recycling facility's construction history is as follows:

- **1962:** Site founded; main office and pier along main channel constructed
- **1966:** Pier along main channel expanded
- **Circa 1968:** Storage building constructed; maintenance building constructed
- **Mid-1990s:** Storage building partially demolished and rebuilt
- **2004:** Maintenance building partially demolished and rebuilt
- **2006:** Mega shredder and support buildings constructed
- **2009:** Scrap processing structure replaced and constructed

*B10. Significance *(continued from page 2):*

History of the SA Recycling Site

The history of the SA Recycling Site has been thoroughly recorded in SWCA's 2011 DPR form for the site and therefore this DPR update did not include extensive research on the history of the site. For a full historic context of the property, review SWCA's 2011 DPR for SA Recycling, attached to this DPR (SWCA 2011: 5). Additionally, the full 2011 DPR citation information, as well as SWCA's 2011 evaluation of Terminal Island, can be accessed through the document cited in *Section B.12 References*.

Significance summary Continued:

As stated above, SWCA's 2011 DPR did not include a full evaluation of the site under LAHCM criteria. The following text provides an evaluation of the site's eligibility under City of Los Angeles LAHCM criteria. This evaluation is solely based on the historic context and analysis presented in the SWCA DPR, as well as observations from Dudek's intensive survey of the site.

LAHCM Criteria 1: Is identified with important events of national, state, or local history or exemplifies significant contributions to the broad cultural, economic or social history of the nation, state, city or community.

The subject property was initially established in 1962 by the Hugo Neu Proler Company. Known currently as the SA Recycling facility, the scrap metal recycling business at the Port of Los Angeles (POLA) emerged following World War II, with the first facility being the National Metal and Steel Corporation, which operated near the subject property until 1986. The subject property merely follows an already-existing and continuous pattern of scrap metal recycling development that began at the POLA facility post World War II. It is merely one of many industrial facilities developed at POLA during this period. Further, the subject property is not directly associated with the invention of the "Proleizer," a significant innovation in the scrap metal

industry. This innovation was developed in Houston in the late-1950s and the subject property was only one of many scrap metal facilities that utilized Proleizer technology throughout the United States. As such, the subject property is ineligible under LAHCM Criteria 1.

LAHCM Criteria 2: Is associated with the lives of historic personages important to national, state, city, or local history; or

To be found eligible under Criterion B/2 the property must be directly tied to an important person and the place where that individual conducted or produced the work for which he or she is known. The Hugo Neu Proler Company was a joint venture founded in the early 1960s when representatives of the Hugo Neu Company (founded 1945) visited the Proler Steel Corporation in Houston. Hugo Neu, who developed the Hugo Neu Proler Company at the site, brought Prolerizer technology to Los Angeles. The Prolerizer technology was invented by Proler brothers in Houston in the late 1950s and was utilized at several recycling facilities throughout the country, including in Jersey City and Kansas City. As such, there is no direct associative connection to the Proler brothers with the subject property. Although it utilized innovative technology, it was not the site of this technology's creation nor was it the first or only facility using this technology. The subject property is one of many recycling facilities that was founded and operated by Neu is not associated with work for which Neu is known and he is not known to be considered a historic figure at the local, state, for national level. As such, the subject property is ineligible under LAHCM Criteria 2.

LAHCM Criteria 3: Embodies the distinctive characteristics of a style, type, period, or method of construction; or represents a notable work of a master designer, builder, or architect whose individual genius influenced his or her age.

SA Recycling is comprised of industrial utilitarian buildings that are common at scrap metal recycling facilities. These buildings are constructed of common materials, primarily with corrugated metal cladding, and appear to have been constructed through already well-documented and common construction techniques and methods. They do not embody distinctive characteristics of a style, type, period or method of construction, nor do they represent a notable work of a master designer, builder, or architect. Further, the site has undergone extensive alterations over the years, including the partial demolition and reconstruction of several original buildings in the mid-1990s and in 2004, and the addition of new buildings and machinery, notably in 2006. As such, the subject facility is ineligible under LAHCM Criteria 3.

Integrity Discussion

To qualify for listing in the NRHP, CRHR, or LAHCM a property must possess both significance and integrity. Additionally, since integrity is the ability of a property to convey its significance, the assessment of integrity can proceed only after the significance of the resource has been fully established. In the specific case of the subject property, SA Recycling, the analysis determined that it lacked significance under any of the applicable criteria. As such, an integrity assessment was considered immaterial.

Significance Summary

In summary, the SA Recycling Facility was evaluated under NRHP and CRHR criteria SWCA in 2011 (See DPR attached). Dudek concurs with these findings. Additionally Dudek finds the SA Recycling facility ineligible under all local LAHCM criteria. Consequently, the SA Recycling facility is ineligible for listing under NRHP, CRHR, and LAHCM Criteria A/1/1, B/2/2, and C/3/3 and does not qualify as a historical resource under CEQA. The recommended California Historical Resource Status Code for the subject property is 6Z (found ineligible for the NRHP, CRHR, or local designation through survey evaluation).

***B12. References:**

Historic Aerials Online (NETR). 2023. Historic Aerial Photographs of 901 New Dock Street dating from 2009, 2010, 2012, 2014, 2016, 2018, and 2020. Electronic Resource: Accessed August 2023. https://www.historicaerials.com/viewer.

SWCA Environmental Consultants. 2011. *Built Environment Evaluation Report for Properties on Terminal Island, Port of Los Angeles, City and County of Los Angeles, California*. Prepared for CDM. December 2011.

SWCA Environmental Consultants. 2011. *Department of Parks and Recreation 523: SA Recycling*. Prepared October 4, 2011.

U.S. Department of the Interior. 1997. "National Register Bulletin 15: How to Apply the National Register Criteria for Evaluation." National Park Service, Cultural Resources. 1997. Accessed January 2023. https://www.nps.gov/subjects/nationalregister/upload/NRB-15_web508.pdf.

State of California — The Resources Agency DEPARTMENT OF PARKS AND RECREATION **PRIMARY RECORD**	Primary # HRI # Trinomial NRHP Status Code 6Z
Other Listings Review Code Reviewer Date	

 ***Resource Name or #:** SA Recycling

P1. Other Identifier: Berths 210 and 211

***P2. Location:** ☐ **Not for Publication** ☒ **Unrestricted** ***a. County:** Los Angeles

and (P2b and P2c or P2d. Attach a Location Map as necessary.)

***b. USGS 7.5' Quad:** San Pedro, California **Date:** 1964 (PR 1981) **T** **R** **¼ of ¼ of Sec**. **B.M.**

c. Address: 901 New Dock Street City: Los Angeles Zip: 90731

d. UTM: Zone: ; mE/ mN (G.P.S.)

e. Other Locational Data: (e.g., parcel #, directions to resource, elevation, etc., as appropriate) Elevation: Terminal Island

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)

Located on the north side of Terminal Island, the subject property is a 26.7-acre site that is situated north of New Dock Street adjacent the Main Channel of the Port of Los Angeles. Also referred to as Berths 210-211, the property has operated as an industrial scrap metal recycling and processing facility since 1962 and is currently operated by SA Recycling, LLC. The industrial property consists of a large paved, open-air scrap yard with an assorted piles of various scrap metals; an office building; a storage building; a maintenance shed; a scrap processing structure; a mega shredder with support buildings; a pier; and other supporting infrastructure.

(See Continuation Sheet)

***P3b. Resource Attributes:** (List attributes and codes) HP8. Industrial Building, HP39. Other

***P4. Resources Present:** ☒Building ☒ Structure ☐Object ☒Site ☐District ☐Element of District ☐Other (Isolates, etc.)

P5b. Description of Photo: (View, date, accession #) Overview of SA Recycling, view to the west, March 8, 2011 (Source: Google Earth)

***P6. Date Constructed/Age and Sources:**
☒ Historic ☐Prehistoric ☐Both
1962-2009, Historic Aerial Photographs and Personal Communication, Fernando Ruiz, Operations Manager, SA Recycling

***P7. Owner and Address:**
Port of Los Angeles
425 Palos Verdes Street
San Pedro, CA 90733

***P8. Recorded by:** (Name, affiliation, and address)
Steven Treffers and Sam Murray
SWCA Environmental Consultants
150 S. Arroyo Parkway, 2nd Floor
Pasadena, CA 91105

***P9. Date Recorded:** October 4, 2011

***P10. Survey Type:** (Describe) Intensive

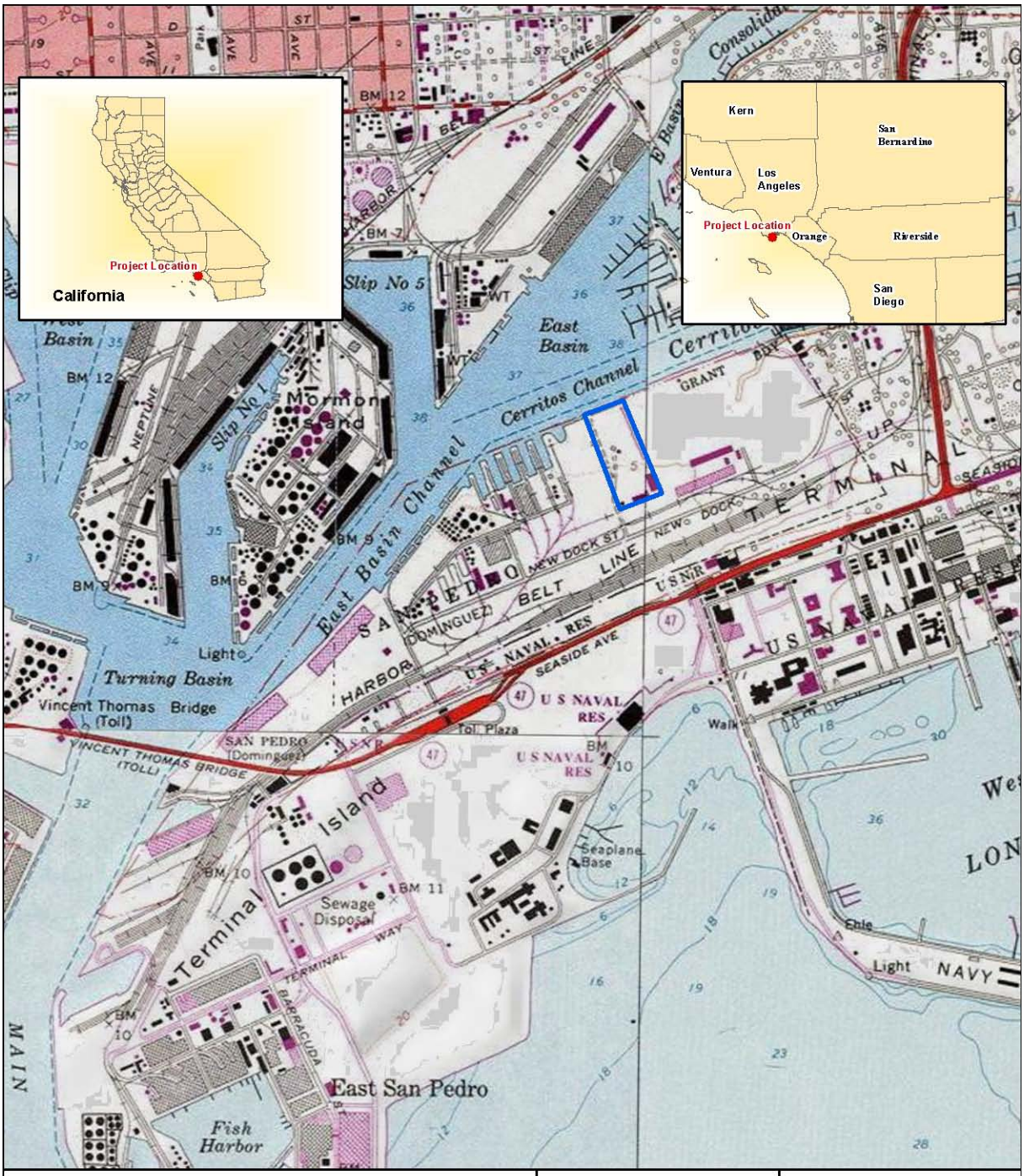
***P11. Report Citation:** (Cite survey report and other sources, or enter "none.")
Built Environment Evaluation Report for Properties on Terminal Island, Port of Los Angeles, City and County of Los Angeles, California (SWCA Environmental Consultants 2011).

***Attachments:** ☐NONE ☒ Location Map ☐Sketch Map ☒Continuation Sheet ☒Building, Structure, and Object Record ☐Archaeological Record ☐District Record ☐ Linear Feature Record ☐Milling Station Record ☐Rock Art Record ☐Artifact Record ☐Photograph Record ☐ Other (List):

State of California — The Resources Agency DEPARTMENT OF PARKS AND RECREATION **LOCATION MAP**	Primary # HRI# Trinomial

Page 2 **of** 5 ***Resource Name or #:** SA Recycling

***Map Name:** San Pedro, California ***Scale:** 1:24,000 ***Date of Map:** 1964 (PR 1981)



BUILDING, STRUCTURE, AND OBJECT RECORD

 ***NRHP Status Code** 6Z

***Resource Name or #** (Assigned by recorder) SA Recycling

B1. Historic Name:

B2. Common Name: Hugo Neu-Proler Scrap Metal, Berths 210 and 211

B3. Original Use: Scrap Metal Recycling B4. Present Use: Scrap Metal Recycling

***B5. Architectural Style:** Industrial, Utilitarian

***B6. Construction History:** (Construction date, alterations, and date of alterations)

Site founded and constructed in 1962 (Historic Aerial Photos, Fernando Ruiz). Pier along main channel initally constructed in 1962 and expanded in 1966 (*Los Angeles Times* 9 June 1966). Storage building constructed ca. 1968 (Historic Aerial Photographs); partially demolished and rebuilt in the mid-1990s (Ruiz). Maintenance building constructed ca. 1968 (Historic Aerial Photographs); partially demolished and rebuilt in 2004 (Ruiz). Mega-shredder and support buildings constructed in 2006 (Historic Aerial Photographs, Ruiz). Scrap processing structure replaced and constructed in 2009 (Historic Aerial Photographs, Ruiz).

***B7. Moved?** ☒ **No** ☐**Yes** ☐**Unknown** **Date:** N/A **Original Location:** N/A

***B8. Related Features:**

B9a. Architect: N/A b. Builder: Unknown

***B10. Significance: Theme:** Port of Los Angeles, 1907-1980 **Area:** Terminal Island, POLA

Period of Significance: 1962 **Property Type:** Recycling Plant **Applicable Criteria:** N/A

Following World War II, the industrial focus of the Port of Los Angeles once again shifted as military work scaled down. Scrap metal recycling quickly became a major export of the Port, beginning with the once extant National Metal and Steel Corporation adjacent to the subject property, which acquired the former site of the California Shipbuilding Corporation after World War II and would operate until 1986. Originally founded as the Hugo Neu-Proler Company, the SA Recycling site is located to the immediate east of the former National Metal and Steel Corporation site and was initially developed in 1962.

(See Continuation Sheet)

B11. Additional Resource Attributes: (List attributes and codes)

***B12. References:**

Board of Harbor Commisioners. *Annual Report of the Board of Harbor Commissioners 1962-63*. Los Angeles Board of Harbor Commissioners.

Ferrel, David. "Junk Cars Litter Byways as Scrap Industry Rusts." *Los Angeles Times*, January 1, 1987, SB1.

Institute of Scrap Iron and Steel. *Proceedings and Selected Background Information*. Washington D.C: Institute of Scrap Iron and Steel, 1965.

Ruiz, Fernando. Personal Communication with Steven Treffers. 2011.

Thomas, Bob. "Scrap Industry Relegating Old Methods to the Junk Heap." *Los Angeles Times*, July 24, 1966, M1.

Turrettini, John. "One Man's Junk…," in Forbes.com, at http://www.forbes.com/global/2004/0112/022_print.html. Accessed August 24, 2011.

Warren, Jennifer. "Abandoned Cars: Neighborhood Eyesores Can Also Lead to Perilous Waste Probelem." *Los Angeles Times*, July 20, 1987, OC_A6.

"Wharf Will Handle Steel From Japan." *Los Angeles Times*, June 9, 1966, C19.

(Sketch Map with north arrow required.)

B13. Remarks:

***B14. Evaluator:** Steven Treffers and Jan Ostashay

***Date of Evaluation:** October 4, 2011

(This space reserved for official comments.)

***P3a. Description: (Continued)**

All buildings on the property are situated at the southeastern portion of the property. All are utilitarian in design and are clad in corrugated metal panels. The office building, which is centrally situated at the southern edge of the property, was constructed in 1962 by the Hugo Neu Proler Company. The flat roof building is a single-story and square in plan. The building is accessed via a door located on the east elevation. All windows are inset into the building and are aluminum-sliding windows. East of the office building, is a large storage building situated along the southern border of the property. The building was initially constructed in 1968, and was partially demolished and rebuilt in the 1990s (historic aerials photographs, Ruiz). The building is rectangular in plan and has a minimally-pitched gabled roof, which is sheathed in corrugated metal panels. The building is accessed via a large opening on the north (front) elevation as well as a large roll-up metal door on the west elevation, both of which extend the height of the building. There are metal, sliding windows west of the large opening on the north elevation. Situated east of the storage building, along the eastern border of the property, is a shop maintenance building. The building was initially constructed around 1968 and was partially demolished and rebuilt a number of times over the years (1970s, 1980s, and in 2004) (historic aerials, Ruiz). The building is rectangular in plan and has a minimally-pitched gabled roof, which is sheathed in corrugated metal panels. The building is open along the north façade and most of the west façade.

Additional structures on the property function specifically for the processing and shipping of scrap metal. These include a large structure situated immediately north of the office building and the storage building. Constructed in 2009, the rectangular-shape structure houses processing machinery. It is comprised of four walls, approximately two-stories in height, constructed of vertical metal beams and metal panels. The outer, top-portion of the walls are sheathed in corrugated metal panels. The roof is partially covered with corrugated metal panels on the western and eastern portion of the building. There is a large opening that extends the height of the structure, a smaller opening that extends half the height of the structure, and a staircase that leads to the second story on the south elevation.

Situated at the center of the property, is the mega-shredder, which was constructed in 2006 for the purpose of shredding metal objects such as automobiles and appliances into smaller, easily shipped pieces. The structure is utilitarian in design and is characterized by a series of conveyor belts, pipes, and tanks. Portions of the structure are approximately three-stories in height and are constructed of exposed metal-beam framing. There are three buildings situated to the northeast and east of the mega-shredder housing transformers and additional machinery that support the operation of large-shredder and equipment. All are utilitarian in design and are sheathed in corrugated metal panels.

Along the northern boundary of the property is a concrete pier, which extends from the west side of the property's dock adjacent the Main Channel in the Port of Los Angeles. A small pier for loading scrap metal was initially constructed with development of the property in 1962 and later expanded in 1966 to accommodate larger vessels. The site is partially enclosed by tall a metal, grate fencing along the property's western and northern borders, stacked cargo containers along its eastern edge, and concrete barrier wall around its southern boundary.

Metal objects to be processed and recycled are delivered via large hauling trucks at the southern border of the property via New Dock Street, where there is a small guard shack for pedestrians and automobiles, and a large guard shack for large shipping trucks. The property is bordered by shipping container terminals to the west and the east and is situated on a level parcel.

***B10. Significance: (Continued)**

The Hugo Neu Proler Company was created as joint venture when representatives from the New York based Hugo Neu Company visited the Proler Steel Corporation in Houston, Texas in the early 1960s. Together they signed a deal to bring the Proler developed and patented automobile shredder called the "Prolerizer" to Los Angeles and start their own large-scale scrap metal recycling plant on Terminal Island. Invented in Houston in the late-1950s by Proler brothers Hymie, Sammy, Izzie, and Jackie, the "Prolerizer" was in use in a number of the Proler plants, including Jersey City and Kansas City, by 1965 (Institute of Scrap Metal 1965). The Hugo Neu Corporation, which had been founded by German immigrant Hugo Neu in 1945 in Texas, had been exporting scrap metal to Japan since 1953 (Turrettini 2004). Combining Hugo Neu's experience in export with Proler's technology, the newly created Hugo Neu-Proler Company joined the industry in 1962, developing the subject property for the direct purpose of increasing their tonnage export of scrap metal to Japan (Los Angeles Board of Harbor Commissioners Annual Report 1962-63:11). The facility would continue to expand into the following decades and at one point in the 1980s, would become the West Coast's largest auto recycling facility, capable of processing 1,000 cars per day (*Los Angeles Times* 1 January 1987). After Sims Group Limited acquired nearly all of the recycling operations of Hugo Neu Corporation in 2005, they applied for a subsidiary name change from Hugo Neu-Proler to Sims Hugo Neu West. In 2007, Sims Group merged with Adams Steel, creating SA Recycling, LLC, the company which currently operates the facility.

Initial construction of the site included in 1962 an office administration building and the installation of the "Prolerizer in 1962; however, because of the nature of the business and the continuing development of the most modern technology of scrap metal recycling, the site has undergone substantial changes over the years, including replacement of the original "Prolerizer" machine. Alterations and additions to the property include the construction of the concrete pier in along the main channel 1966 for the accommodation of larger vessels (*Los Angeles Times*). Construction of the storage and maintenance buildings in the late 1960s (circa 1968, Historic Aerial Photographs, Ruiz). The partial demolition and reconstruction of the circa 1968 storage building in the mid-1990s (Historic Aerial Photographs, Ruiz). The partial demolition and reconstruction of the circa 1968 maintenance building in 2004 (Historic Aerial Photographs, Ruiz). The replacement of the "Prolerizer" with the mega-shredder and support buildings in 2006 (Historic Aerial Photographs, Ruiz). The construction of the scrap processing structure in 2009 (Ruiz).

In assessing the property's significance, it is not directly associated with the historical development of the scrap metal recycling industry within the Port of Los Angeles; and although it is associated with the "Prolerizer," a major innovation in the scrap metal industry, it was not location of its invention and was one of many facilities using this technology across the country. As a result, the property does not appear eligible for listing in the National or California registers under Criteria A/1 for its associations with important events or patterns of development. While both Hugo Neu and the Proler brothers were influential in the scrap metal recycling business, neither appear personally related to the development or operation of the subject property outside of the Hugo Neu-Proler Company's development of the site and as such, the property does not appear eligible for the National or California registers under Criteria B/2 for its associations with important persons. The buildings and structures of the sites are utilitarian resources that are ubiquitous to scrap metal recycling facilities and have been substantially altered and replaced since the initial development of the site; hence, they do not appear eligible for National or California registers for their architectural significance under Criteria C/3. In addition, no evidence was discovered to warrant consideration under Criteria D/4. The property is also not eligible as a contributor to a larger historic district. The property does not appear eligible for local designation.

Appendix E1

Department of Toxic Substances Control and SA Recycling Consent Order Final

STATE OF CALIFORNIA
ENVIRONMENTAL PROTECTION AGENCY
DEPARTMENT OF TOXIC SUBSTANCES CONTROL

In the Matter of: SA Recycling, LLC Terminal Island 901 New Dock Street, San Pedro CA 90731 ID No. CAL 000338569 Respondent	Docket HWCA 20187418 CONSENT ORDER Health and Safety Code Section 25187

INTRODUCTION

The California Department of Toxic Substances Control (Department) and SA Recycling, LLC (Respondent), collectively the "Parties," enter into this Consent Order and agree as follows:

1. Respondent generates and handles hazardous waste at SA Recycling, Terminal Island, located at 901 New Dock Street, San Pedro, California 90731 (the "Site").

2. The Department inspected the Site and/or areas surrounding the Site on February 22, 2017 (*see* Summary of Violations (SOV) dated May 16, 2017, and October 9, 2017), October 10, 2018, and November 2, 2018 (*see* SOVs dated November 2, 2018, and June 12, 2019), March 20, 2019 (*see* SOVs dated May 24, 2019, September 8, 2020, and November 10, 2021), September 1, 2021, (see SOV dated September 30, 2021) and January 19, 2022, (see SOV dated March

24, 2022). Between January of 2022 and the present, DTSC conducted several off-site sampling events at areas surrounding the Site that did not result in findings of additional violations.

3. The Department alleges the following violations:

3.1 Respondent violated California Health and Safety Code (HSC), Division 20, Chapter 6.5, Article 5, section 25154, in that it unlawfully managed (stored) hazardous material onsite, to wit: on or about February 22, 2017, the Department observed several hundred tons of soil and potentially recoverable metals stored on pavement in approximately the middle of the Respondent's yard, just northwest of the Metal Recovery Plant (MRP). Samples taken from the pile exceeded the hazardous waste thresholds for Soluble Threshold Limit Concentration (STLC) for copper, lead and zinc, and Total Threshold Limit Concentration (TTLC) for lead and/or zinc. Hazardous material stored in a waste pile must meet the Interim Status Standard requirements under California Code of Regulations, title 22, Chapter 15.

3.2 Respondent violated California Code of Regulations (Cal. Code Regs.), title 22, section 66265.31, in that Respondent failed to minimize the possibility of release of hazardous waste or hazardous waste constituents to the air, soil, or surface water, which could threaten human health or the environment, to wit: on or about February 22, 2017, the Department observed the following: Treated Metal Shredder Residue (tMSR) on the ground near the MRP building entrance and trapped in holes in the exterior northeast wall. A sample of the tMSR

collected during the inspection (Sample SATI-08B), was hazardous for TTLC copper and zinc, and STLC zinc.

3.3 Respondent violated Cal. Code Regs., title 22, sections 66262.10(h), 66262.34(a)(4), and 66265.31, in that on or about October 10, 2018, and November 2, 2018, Respondent failed to maintain and operate the Site to minimize the possibility of a fire, explosion, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, or surface water which could threaten human health or the environment, to wit: on October 10, 2018, the Department observed patches of light fibrous material (LFM) located on the ground in the Yusen Terminal (YTI) yard along the west perimeter fence of the Site. LFM is generated by Respondent from the metal shredding equipment used at the Site. On November 2, 2018, the Department observed patches of LFM located on the ground along New Dock Street 80-100 yards south of the Respondent's yard and across the street on New Dock Street. A total of nine samples were collected by the Department. The sample results showed eight of the nine samples exceeded the hazardous waste threshold for STLC and/or TTLC for lead and/or zinc. The samples also contained constituents of other regulated heavy metals commonly found in wastes from scrap metal operations, including copper.

3.4 Respondent violated HSC section 25189.2(c), disposal of hazardous waste at a facility, area, or point that is not authorized, and Cal. Code Regs., title 22, sections 66262.10(h), 66262.34(a)(4), and 66265.31; failure to minimize the

possibility of release of hazardous waste or hazardous waste constituents to the air, soil, or surface water which could threaten human health or the environment, in that Respondent disposed of hazardous waste at two offsite locations, to wit: on October 10, 2018, the Department observed patches of LFM located on the ground in the Yusen Terminal (YTI) yard along the west perimeter fence of Respondent's yard. On November 2, 2018, the Department observed patches of LFM located on the ground along New Dock Street 80-100 yards south of the Respondent's yard and across the street on New Dock Street. LFM is generated by Respondent from the metal shredding and metal processing equipment it uses onsite. A total of nine samples were collected by the Department. The sample results showed eight of the nine samples contained soluble lead and/or zinc concentrations above the hazardous waste threshold for STLC and/or TTLC. The samples also contained constituents of other regulated heavy metals commonly found in wastes from scrap metal operations, including copper. Respondent also allowed piles of LFM/soil/debris to accumulate on the ground under and around the shredder and ferrous treatment systems onsite. Samples taken of the LFM/soil/debris were hazardous for TTLC copper, lead and zinc, and STLC lead and zinc.

3.5 Respondent violated Cal. Code Regs., title 22, sections 66262.10(h), 66262.34(a)(4), and 66265.31, in that, on or about March 20, 2019, Respondent failed to minimize the possibility of the release of hazardous waste or hazardous waste constituents to the air, soil, or surface water which could threaten human

health or the environment, to wit: the Department observed water sprayed over incoming scrap loads and water used for dust suppression in the Respondent's yard and around scrap metal processing equipment. These waters traveled around the Site's yard, mixed with dust, soils and debris, and ended up in blind sumps in the yard. According to Respondent staff, the resulting sludge was pumped from the sumps and placed into gridded sieving bins at the Water Treatment System (WTS) located in the southern part of the yard. During sieving of the sludge, water was observed dripping into the bermed, concreted area. The concrete in this area had cracks. The water was not fully captured. The Department collected samples from the sludge in the de-watering containers and from the sludge in a blind sump located in the western part of the yard (Samples SATI-114A and SATI-115A, respectively). Sample SATI-114A was hazardous for TTLC zinc and SATI-115A was hazardous for STLC chromium and zinc. The Department also collected a sample of water directly from the water truck from which the water was dispensed for dust suppression (Sample SATI-102A), which contained regulated metals below hazardous waste thresholds, and several Volatile Organic Compounds including acetone and methyl ethyl ketone.

3.6 Respondent violated HSC section 25189.2(d) in that, on or about March 20, 2019, Respondent treated a hazardous waste at a point that is not authorized, to wit: the Department observed two de-watering bins in which the water from water and sediment inside was dripping into the concreted, bermed area. The Department collected samples of the solids, the sludge in the de-

watering bins, and from the sludge in a blind sump located in the western part of the yard (Samples SATI-113A, SATI-114A and SATI-115A, respectively). Sample SATI-113A was hazardous for TTLC copper and STLC zinc, SATI-114A was hazardous for TTLC copper, and SATI-115A was hazardous for STLC chromium and zinc. Based on the results of analytical testing, the solids and sludge(s) were hazardous waste generated from treatment conducted in the WTS without regulatory authorization. Respondent did not qualify for the treatment exemption in HSC, Section 25123.5 (b)(1)(A) because the hazardous waste sludge was not stored in a proper container and was not fully captured, so the treatment did not meet the requirements governing the generation and accumulation of hazardous waste.

3.7 Respondent violated HSC sections 25189.2(d) and 25201(a); no owner or operator of a storage facility, treatment facility, transfer facility, resource recovery facility, or disposal site shall accept, treat, store, or dispose of a hazardous waste at the facility, area, or site, unless the owner or operator holds a hazardous waste facilities permit or other grant of authorization from the Department to use and operate the facility, area, or site. On or about March 19, 2019, Respondent accepted, stored, and subsequently treated hazardous waste soil and debris mixed with metals on in-bound transfer ticket #CZRE06 from its feeder yard located at 2728 Long Beach Avenue, Los Angeles, California. During an investigation conducted at the Site on March 20, 2019, the Department collected Samples (SATI-101A/B) from a roll-off bin holding the hazardous waste

soil and debris; the samples were hazardous for TTLC copper, lead and zinc, and STLC chromium, lead and zinc. The material in these bins was hazardous waste mixed with recoverable metal, and was received by Respondent from offsite, therefore, Respondent received, stored and treated hazardous waste without a hazardous waste facilities permit or other grant of authorization from the Department.

3.8 Respondent violated HSC sections 25203 and 25189.2 (c), in that on or before September 1, 2021, Respondent disposed of a hazardous waste at a point that is not authorized according to the provisions of Chapter 6.5 of the HSC. The disposal of any hazardous waste, or the causing thereof, is prohibited when the disposal is at a facility which does not have a permit from the Department issued pursuant to Chapter 6.5 of the HSC, or at any point which is not authorized according to this chapter. On September 1, 2021, the Department observed and sampled patches, clumps, and accumulations of LFM on the pavement, in pavement cracks, on equipment, inside utility vaults, and inside and over storm drains at, Pasha Stevedoring & Terminals L.P., located next to the Site at 701 New Dock Street, Terminal Island, California (Pasha Terminals). LFM is generated by Respondent from its metal shredding, and subsequent metal processing and separation operations. The Department collected eight samples containing LFM from Pasha Terminals. Analytical results from the eight samples showed that all eight samples exhibited the hazardous waste characteristic of toxicity by exceeding the STLC for soluble lead and zinc, while six of the eight

samples exceeded the STLC for cadmium. Five of the eight samples also exhibited the hazardous waste characteristic of toxicity by exceeding the TTLC for lead, and six of the eight samples exceeded the TTLC for zinc.

3.9 Respondent violated HSC sections 25203 and 25189.2 (c), in that on or before January 19, 2022, Respondent disposed of a hazardous waste in the form of LFM at a point that is not authorized according to the provisions of this chapter. The disposal of any hazardous waste, or the causing thereof, is prohibited when the disposal is at a facility which does not have a permit from the Department issued pursuant to Chapter 6.5, or at any point which is not authorized according to this chapter. On January 19, 2022, the Department observed and sampled patches, clumps, and accumulations of LFM on the asphalt at YTI's west yard, located next to the Site, and on the asphalt shoulder of New Dock Street south of the Site and YTI. LFM is generated by Respondent from its metal shredding, and subsequent metal processing and separation operations at the Site. Analytical results from three of the four samples containing LFM (sample SATI-SS-01 was not analyzed for STLC due to insufficient sample) exhibited the hazardous waste characteristics of toxicity by exceeding the STLC limit for soluble lead and zinc. Two samples exceeded the TTLC for zinc.

3.10 Respondent violated Cal.Code Regs, title 22, section 66265.31, via 66262.34(a)(4) in that on or before January 19, 2022, Respondent failed to minimize the possibility of release of hazardous waste or hazardous waste constituents to the air, soil, or surface water which could threaten human health or

the environment, to wit: on January 19, 2022; the Department observed and sampled patches, clumps, and accumulations of LFM on the asphalt at YTI's west yard, and on the asphalt shoulder of New Dock Street south of the Site and YTI. LFM is generated by Respondent from its metal shredding, and subsequent metal processing and separation operations at the Site. The Department collected one sample containing LFM from YTI. Analytical results from the sample indicated an elevated level of lead, and a high level of zinc, just below TTLC hazardous waste limits (the sample was not analyzed for STLC). Three samples collected by the Department containing LFM collected on January 19, 2022, from the asphalt shoulder of New Dock Street exhibited the hazardous waste characteristic of toxicity by exceeding the STLC limits for soluble lead and zinc. Two samples exceeded the TTLC limits for zinc.

4. Jurisdiction exists pursuant to Health and Safety Code section 25187.

5. Respondent waives any right to a hearing in this matter and waives any right to appeal this Consent Order.

6. Respondent admits the violations 3.3, 3.4, 3.8, 3.9, and 3.10. A dispute exists regarding the remaining alleged violations.

7. This Consent Order shall constitute full settlement of the violations alleged above, and identified in the SOVs set forth in Paragraph 2, but does not limit the Department from taking appropriate enforcement action concerning any other violations, except to the extent expressly provided in this Consent Order. This Consent Order revokes and replaces the DTSC Enforcement Order For

Corrective Action, HWCA-FY20/21-015 10/18/2021, and the subsequent appeal and Request for Hearing filed by Respondent.

COMPLIANCE REQUIREMENTS

8. Respondent shall immediately comply with all applicable provisions of the Hazardous Waste Control Law (Health & Safety Code section 25100 et seq.) and its implementing regulations (Cal. Code of Regs., tit 22, section 66260.1, et seq.) at the Site.

9. Respondent shall comply with the provisions of Exhibit A, in accordance with the schedule provided in Attachment 1 of Exhibit A.

9.1 The alleged violation in Item 3.1 above has been corrected.

9.2 The alleged violation in Item 3.2 above has been corrected.

9.3 Return to compliance requirements for the violation in Item 3.3 above are addressed in Exhibit A.

9.4 Return to compliance requirements for the violation in Item 3.4 above are addressed in Exhibit A.

9.5 Return to compliance requirements for the alleged violation in Item 3.5 above requires Respondent to install a Permit By Rule authorized filter press that captures and returns water to the Water Treatment System, or otherwise capture the water dripping from the gridded sieving bins in the Water Treatment System area. Respondent shall produce to DTSC evidence of any changes to the Water Treatment System (e.g., photographs, application, explanation) within 60 days of the Effective Date.

9.6 Return to compliance requirements for the alleged violation in Item 3.6 above requires Respondent to install a Permit By Rule authorized filter press that captures and returns water to the Water Treatment System, or otherwise capture the water dripping from the gridded sieving bins in the Water Treatment System area. Respondent shall produce to DTSC evidence of any changes to the Water Treatment System (e.g., photographs, application, explanation) within 60 days of the Effective Date.

9.7 Return to compliance requirements for the alleged violation in 3.7 requires Respondent to submit an acceptance policy and quality control procedures for determination of acceptable loads received from offsite within 60 days of the Effective Date.

9.8 Return to compliance requirements for the violation in Item 3.8 above are addressed in Exhibit A.

9.9 Return to compliance requirements for the violation in Item 3.9 above are addressed in Exhibit A.

9.10 Return to compliance requirements for the violation in Item 3.10 above are addressed in Exhibit A.

9.11 Nothing in this Consent Order shall excuse Respondent from complying with all requirements imposed by applicable law or by future statutory or regulatory changes in the applicable law, including, without limitation, submission to the Department of any applicable permit application.

10. Submittals: All submittals from Respondent pursuant to this Consent

Order shall be sent simultaneously to:

Dylan Clark
Environmental Program Manager I (Sup)
Office of Criminal Investigations
Department of Toxic Substances Control
8800 Cal Center Drive
Sacramento, California 95826-3200
Dylan.Clark@dtsc.ca.gov

Mario Tresierras
Acting Division Chief, Health Hazardous Materials Division
County of Los Angeles Fire Department
5825 Rickenbacker Road
Commerce, CA 90040-3027

Royce Long
CUPA Manager
City of Los Angeles Fire Department
200 N Main St.
Room 1780
Los Angeles, CA 90012-4126

10.1 Communications: All approvals and decisions of the Department made regarding such submittals and notifications are effective only if communicated to Respondent in writing by a Department Branch Chief or their designee. No advice, guidance, suggestions, or comments by the Department regarding reports, plans, specifications, schedules, proposals, or any other communications by Respondent shall be construed to relieve Respondent of the obligation to obtain such formal, written approvals as may be required.

10.2 Department Review and Approval: If the Department determines that any report, plan, schedule, or other document submitted for approval pursuant to this Consent Order fails to comply with the Consent Order or fails to protect public

health or safety or the environment, the Department may return the document to Respondent with recommended changes and a date by which Respondent must submit to the Department a revised document incorporating the recommended changes.

10.3 Compliance with Applicable Laws: Respondent shall carry out this Consent Order in compliance with all local, state, and federal requirements, including but not limited to requirements to obtain permits and to assure worker safety.

10.4 Endangerment During Implementation: In the event that the Department determines that any circumstance or activity (whether or not pursued in compliance with this Consent Order) creates an imminent or substantial endangerment to the health or welfare of people on the site or in the surrounding area or to the environment, the Department may issue a stop work order ("Stop Work Order") requiring Respondent to stop further implementation for such period of time as needed to abate the endangerment. Any deadline in this Consent Order directly affected by a Stop Work Order under this section shall be extended for the term of such Stop Work Order.

10.5 Liability: Nothing in this Consent Order shall constitute or be construed as a satisfaction or release from liability for any conditions or claims arising as a result of past, current, or future operations of Respondent, except as expressly provided in this Consent Order. Notwithstanding compliance with the terms of this Consent Order, the Department and any other governmental agency

with authority to do so may require Respondent to take further actions to protect public health or welfare or the environment, as allowed by law.

10.6 Site Access: Access to the Site shall be provided at all reasonable times to employees, contractors, and consultants of the Department, and any agency having jurisdiction. Nothing in this Consent Order is intended to limit in any way the right of entry or inspection that any agency may otherwise have under applicable law, including but not limited to statute and regulations. The Department and its authorized representatives may enter, have access to, and move freely about all property at the Site at all reasonable times for purposes including but not limited to inspecting records, operating logs, and contracts relating to the Site; reviewing the progress of Respondent in carrying out the terms of this Consent Order; and conducting such tests and sampling as the Department may deem necessary. Respondent shall permit such persons to inspect and copy all records, documents, and other writings, including all sampling and monitoring data, in any way pertaining to work undertaken pursuant to this Consent Order.

10.7 Sampling, Data, and Document Availability: Respondent shall permit the Department and its authorized representatives to inspect and copy all sampling, testing, monitoring, and other data generated by Respondent or on Respondent's behalf in any way pertaining to work undertaken pursuant to this Consent Order. Respondent shall allow the Department and its authorized representatives to take duplicates of any samples collected by Respondent

pursuant to this Consent Order. Respondent shall maintain a central depository of the data, reports, and other documents prepared pursuant to this Consent Order. All such data, reports, and other documents shall be preserved by Respondent for a minimum of six years after the conclusion of all activities under this Consent Order. If the Department requests that some or all of these documents be preserved for a longer period of time, Respondent shall either comply with that request, deliver the documents to the Department, or permit the Department to copy the documents prior to destruction. Respondent shall notify the Department in writing at least six months prior to destroying any documents prepared pursuant to this Consent Order.

10.8 Government Liabilities: The State of California shall not be liable for injuries or damages to persons or property resulting from acts or omissions by Respondent or related parties specified in Paragraphs 8 and 9 in carrying out activities pursuant to this Consent Order, nor shall the State of California be held as a party to any contract entered into by Respondent or Respondent's agent(s) in carrying out activities pursuant to this Consent Order.

10.9 Incorporation of Plans and Reports: All plans, schedules, and reports that require Department approval and are submitted by Respondent pursuant to this Consent Order are incorporated into this Consent Order upon approval by the Department.

10.10 Extension Requests: If Respondent is unable to perform any activity or submit any document within the time required under this Consent Order, the

Respondent may, prior to expiration of the time, request an extension of time in writing. The extension request shall include a justification for the delay.

10.11 Extension Approvals: The Department has sole, unfettered discretion to grant or deny a request for an extension. If the Department determines that good cause exists for an extension, the Department will grant the request and specify in writing a new compliance schedule.

PAYMENTS

11. Within 30 calendar days of the Effective Date of this Consent Order, as defined in Paragraph 15 below, Respondent shall pay a total of two hundred ninety-four thousand and three hundred dollars ($294,300) of which one hundred, forty-seven thousand and one hundred and fifty dollars ($147,150) is an administrative penalty and one hundred, forty-seven thousand and one hundred and fifty dollars ($147,150) is an offset to be paid toward one or more Supplemental Environmental Projects (SEPs) described in Paragraph 11.1 below.

Respondent's check or electronic funds transfer (EFT) shall be made payable to Department of Toxic Substances Control. If Respondent makes payment by EFT, the payment shall be made as directed in the “Electronic Fund Transfer Instructions” provided by the Department to Respondent. As soon as the EFT payment is completed, Respondent shall notify the Department’s Accounting Office by email (accounting@dtsc.ca.gov), and Faith Friend (faith.friend@dtsc.ca.gov). If payment is made by check, the check shall identify the Respondent and Docket Number as shown in the caption of this Consent

Order, and shall be delivered together with the attached Payment Voucher to:

Department of Toxic Substances Control
Accounting Office
1001 I Street, 21st floor
P. O. Box 806
Sacramento, California 95812-0806

If payment is made by check, a photocopy of the check shall also be sent:

To: Dylan Clark
Environmental Program Manager I (Sup)
Office of Criminal Investigations
Department of Toxic Substances Control
8800 Cal Center Drive
Sacramento, California 95826-3200
Dylan.Clark@dtsc.ca.gov

To: Jordan Gaskins
Attorney III (Specialist)
Office of Legal Counsel
Department of Toxic Substances Control
9211 Oakdale Avenue
Chatsworth, California 91311-6505
Jordan.gaskins@dtsc.ca.gov

11.1 Within 30 calendar days of the Effective Date of this Consent Order, as defined in Paragraph 15 below, in addition to the administrative penalty amount set forth in Paragraph 11, Respondent shall provide the Department with a copy of receipt(s) of payment(s) totaling one hundred, forty-seven thousand and one hundred and fifty dollars ($147,150) as Supplemental Environmental Project (SEP) Payments ("SEP Payments"). Respondent's payment for SEPs shall be divided among the following projects:

(i) The California Science Center Project

Sixty-five thousand dollars ($65,000) to the California Science Center

Foundation for the Ecosystems exhibition wing, which examines how air, water, land and life are interconnected and shaped by the same fundamental principles of ecology. This permanent gallery features some 200 species of live plants and animals, and hands-on science exhibits in 11 immersive environments. Specifically, the funding shall be for ScienceLive! interactive demonstration programs offered free of charge to expand upon and complement the scientific principles illustrated within the Ecosystems exhibition wing. Teens in grades 10 through 12 from local underserved communities participating in the Science Center's Community Teen Program also conduct ScienceLive! demonstrations as part of a year-round science-based internship opportunity that integrates science education with paid work experience and college readiness instruction.

These funds shall be placed and held in a restricted and designated account and may not be co-mingled with other funds. The California Science Center Foundation shall ensure that these funds are expended for the purposes specified, and commencing one year after receipt of the funds and each year thereafter shall, until the exhaustion of the funds, provide an annual report to the Department describing the specific use of the funds and describing the activities completed. The report shall be submitted to the Department's representatives identified in Paragraph 11;

(ii) California Product Stewardship Council

Forty-one thousand and seventy-five dollars ($41,075) to the California Product Stewardship Council (CPSC) to increase the safe collection and recycling

of all batteries to reduce potential environmental contamination, risk of fires and resulting injuries and property damage from improperly disposed batteries, and preserve precious resources.

CPSC will recruit new collection locations and conduct public education outreach to increase awareness collections through a variety of media best suited for the area and vendors. CPSC may also host one-day collection events, and potentially provide free rechargeable batteries in return for single-use batteries.

CPSC shall ensure that these funds are expended for the purposes specified, and commencing one year after the receipt of funds and each year thereafter shall, until the exhaustion of the funds, provide an annual report to the Department describing the specific use of the funds and describing the activities completed. The report shall be submitted to the Department's representatives identified in Paragraph 11;

(iii) California Safe Schools: Stash Trash Recycling Program

Forty-one thousand and seventy-five dollars ($41,075) to California Safe Schools to create unique and groundbreaking educational recycling presentations that will focus on Schools & Youth. Children will be provided with interesting materials on conservation that include incentives, goals and recycling bins to encourage behavior that will extend beyond school and into homes and communities.

California Safe Schools shall ensure that these funds are expended for the purposes specified, and commencing one year after the receipt of funds and each

year thereafter shall, until the exhaustion of the funds, provide an annual report to the Department describing the specific use of the funds and describing the activities completed. The report shall be submitted to the Department's representatives identified in Paragraph 11;

11.2 If any one of the recipients specified in 11.1 refuses or does not otherwise retain the SEP payment, the allocated funds shall be divided on a pro rata basis between the remaining recipients. If none of the recipients specified in 11.1 can receive the funds for the purposes specified, or are otherwise disqualified by DTSC, the parties shall meet and confer within fourteen (14) days to agree whether the SEP payment shall be remitted instead as a penalty payment to DTSC or if an alternative SEP(s) should be identified. If the parties cannot agree, then the allocated SEP Payments shall be paid as penalties as specified in Paragraph 11.1.

11.3 If Respondent fails to pay the SEP Payments within 30 Days of the Department's issuance of this Consent Order, Respondent shall pay to the Department as civil penalties pursuant to the HWCL within seven (7) Days the remaining balance of the SEP Payments that Respondent has not paid as SEP Payments. Upon proof that Respondent has completed the SEP Payments within 30 Days of DTSC's issuance of this Consent Order the suspended penalty shall be deemed satisfied.

11.4 If Respondent or a SEP recipient publicizes the SEP or results of the SEP, any publicity shall prominently state that the SEP is part of an enforcement

settlement agreement between the Department and Respondent.

12. If Respondent fail(s) to make payment as provided above, Respondent agree(s) to pay interest at the rate established pursuant to Health and Safety Code section 25360.1 and to pay all costs incurred by the Department in pursuing collection, including, but not limited to, attorney's fees.

OTHER PROVISIONS

13. Penalties for Noncompliance: Failure to comply with the terms of this Consent Order may subject Respondent to costs, civil penalties, and/or punitive damages, including any costs incurred by the Department or other government agencies as a result of such failure, as provided by Health and Safety Code section 25188 and other applicable provisions of law.

14. Parties Bound: This Consent Order shall apply to and be binding upon Respondent and Respondent's officers, directors, agents, receivers, trustees, employees, successors, and assignees, including but not limited to individuals, partners, and subsidiary and parent corporations, and upon the Department and any successor agency that may have responsibility for and jurisdiction over the subject matter of this Consent Order. Respondent is responsible for imposing any and all requirements under this order on any contractors or consultants under respondent's control.

15. Effective Date: The Effective Date of this Consent Order is the date the Consent Order is signed by the Department.

16. Integration: This Consent Order constitutes the entire agreement

between the Parties and may not be amended, supplemented, or modified, except by express written agreement signed by authorized representatives of each of the Parties.

17. Headings: The headings contained in this Consent Order are for reference purposes only and shall not affect in any way the meaning or interpretation of this Consent Order.

18. Consent Order Jointly Drafted: The Parties agree that this Consent Order shall be construed as if the Parties jointly prepared this Consent Order and that this Consent Order shall not be construed against any Party on the ground that such Party drafted the Consent Order.

19. Reviewed by Counsel: The Parties acknowledge that they have had the opportunity to consult with counsel concerning this matter, that they have read and fully understand the terms of this Consent Order or have had the Consent Order analyzed by their counsel, and that they are fully aware of the Consent Order's contents and legal effect.

20. Continuing Jurisdiction: In the event that any provision of this Consent Order, or the application of any such provision to any party or set of circumstances, is for any reason or to any extent determined to be invalid, unlawful, void or unenforceable (hereafter collectively "Void"), the Parties shall negotiate in good faith to modify this Consent Order in a mutually acceptable manner to produce a Consent Order effecting the Parties' original intent as closely as possible and to the fullest extent possible without any Void provisions. If the

Parties are unable to mutually agree on such a modification to this Consent Order, a governmental body or other tribunal having jurisdiction to do so is authorized, and requested, to modify this Consent Order to effect the Parties' original intent as closely as possible and to the fullest extent possible without any Void provisions.

21. Authority to Bind: Respondent warrants and guarantees Respondent's signatory or signatories below has or have been duly authorized and has or have full authority to execute this Consent Order on behalf of Respondent.

22. Electronic Signatures: The Parties acknowledge and agree that this Consent Order may be executed by electronic signature, which shall be considered as an original signature for all purposes and shall have the same force and effect as an original signature.

23. Counterparts: This Consent Order may be executed and delivered in one or more counterparts, each of which counterpart when executed and delivered shall be deemed to be an original, but such counterparts shall together constitute one and the same document.

24. Definitions: All terms used in this Consent Order and corresponding Exhibit A that are defined in HSC section 25501, have the same meaning as set forth under that section.

Dated: 12/12/23

Tyler Adams
Chief Operating Officer
SA Recycling, LLC
Respondent

Dated: 12/12/23 _____ Dylan Clark _____

Dylan Clark
Environmental Program Manager I (Supervisory)
Office of Criminal Investigations
Department of Toxic Substances Control

Copies To:

Mario Tresierras
Acting Division Chief, Health Hazardous Materials Division
County of Los Angeles Fire Department
5825 Rickenbacker Road
Commerce, CA 90040-3027

Royce Long
CUPA Manager
City of Los Angeles Fire Department
200 N Main St.
Room 1780
Los Angeles, CA 90012-4126

Wayne Lorentzen
Division Chief
Office of Permitting
Department of Toxic Substances Control

Michael DiBernardo
Deputy Executive Director of Marketing and Customer Relations
Port of Los Angeles
425 South Palos Verdes Street
San Pedro, CA, USA 90731

EXHIBIT A

TERM SHEET: Between SA Recycling Terminal Island (Respondent) and the California Department of Toxic Substances Control (Department)

Injunctive Provisions

1. Facility Investigation/Workplans
   1.1. Following the Department's approval, Respondent shall conduct work as set forth under the Off-Site LFM Investigation Work Plan and the Off-Site LFM Cleanup and Removal Action Work Plan, issued 26 October 2021, which Respondent submitted in response to the Department's September 30, 2021, Summary of Violations (SOV).
   1.2. Respondent has submitted the Site Characterization Report[1] prepared for the Port of Los Angeles, dated October 30, 2023, and all Exhibits, Tables and Figures, to the Department for review and comment. Within 90 days, Respondent shall also prepare and submit a separate report on per- and polyfluoroalkyl substances identified in soil and groundwater during the preparation of the Site Characterization Report[2]. The Department shall identify data gaps, and provide direction for evaluating further characterization, as appropriate, and any interim measures.
   1.3. Based on DTSC direction following review of the Site Characterization Report and other available data, including the report on identified per- and polyfluoroalkyl substances, a supplemental Site Investigation Workplan shall be submitted to the Department for approval. It shall be prepared as directed by the Department to define the nature and extent of any contamination for purposes of performing any additional Site Investigation. Following the Department's approval of the Site Investigation Workplan, Respondent shall perform a further facility investigation satisfactory to the Department of all areas of the Site where facility operations are or have been conducted to determine if a release or threatened release of hazardous substances, hazardous waste or hazardous materials has occurred or may occur at the Site that poses a threat or potential threat to human health and the environment. Following the investigation, a follow-up Site Investigation Report shall be submitted summarizing the nature and extent of contamination, data gaps, potential and actual releases and provide recommendations, evaluating the need for remedial actions or interim measures.
   1.4. Respondent's obligations under section 1.1 above to do not limit the obligations set forth under section 1.3 above.
2. Interim/Permanent Measures and Corrective Action
   2.1. Respondent shall evaluate available data and assess the need for interim measures necessary to minimize the release of and prevent the disposal of hazardous substances, hazardous materials, hazardous waste or hazardous waste constituents. Interim measures shall be used whenever possible to control or abate immediate threats to human health and/or the environment, and to prevent and/or minimize the spread of contaminants while any necessary long-term corrective action alternatives are being evaluated.

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[1] This report describes investigation activities conducted to evaluate soil and groundwater conditions at the Site, as required in the Revised Site Characterization Work Plan (Work Plan; GSI 2023) originally issued August 30, 2022, and revised March 27, 2023.

[2] Soil and groundwater samples taken by the Port of Los Angeles reflect the presence of per- and polyfluoroalkyl substances in site soil and groundwater.

EXHIBIT A

2.2. Respondent shall submit a Current Conditions Report to the Department within 90 calendar days of execution of the Consent Order. This report shall evaluate any and all sources resulting in the on-site or off-site release of hazardous substances, hazardous materials, hazardous waste or hazardous waste constituents.

2.3. Respondent or the Department may propose Interim Measures to control or abate immediate threats to human health or the environment, or to effectively control the spread of any contamination while long-term corrective action alternatives are being evaluated. If the Department determines data collected shows that current human exposures to contamination at or from the Site are not under control or migration of groundwater at or from the Site is not stabilized, the Department may require Interim Measures or corrective actions, or both. Respondent shall prepare a Corrective Action Plan, and the Department may require corrective actions, if contaminant concentrations exceed current health-based action levels, as determined through a Risk Assessment, and/or if the Department determines, based on a Risk Assessment, that the contaminant releases pose an unacceptable threat to human health and/or the environment. If the Department requires Interim Measures or corrective action, Respondent shall submit for Department approval, an Interim Measures Workplan within 45 days, and a Corrective Action Plan within 60 days, of receiving a written request by the Department.

2.4. Any Interim Measure or corrective action that includes the removal of pavement overlying contaminated soils would be evaluated in a Department-Approved Workplan and the need for such action must be supported by a clearly demonstrated, data-driven, risk-based determination or documentation.

2.5. A qualified, independent, third-party contractor shall be hired to identify controls and other efforts by Respondent to prevent and/or manage any release of LFM by Respondent and evaluate the effectiveness of such controls and to make recommendations on additional control measures needed to minimize releases of LFM.

3. Risk Assessment

3.1. Respondent shall be entitled or may be required to conduct a Risk Assessment to evaluate potential human health risk and ecological risk and to establish site-specific action levels and cleanup standards based on the current industrial land use. If Respondent elects to conduct a Risk Assessment, or if the Department determines that a Risk Assessment is required, Respondent shall submit to the Department for approval a Risk Assessment Workplan within 90 days of receipt of the Department's determination. Respondent shall submit to the Department for approval a Risk Assessment Report in accordance with a Department-approved schedule or upon the Department's request.

4. Department-Approved Workplans

4.1. Respondent shall perform the work required by this Term Sheet in a manner consistent with Department-approved Site Investigation Workplan and any other Department-approved corrective action workplans.

5. Financial Assurance

5.1. Respondent shall include a corrective action cost estimate in any evaluation of potential corrective actions submitted to the Department pursuant to this Term Sheet, and shall demonstrate financial assurances within 90 days of the Department's approval of a remedy selection document and shall maintain financial assurances until the Department determines

that any required corrective actions are complete. Respondent shall demonstrate and maintain one or more of the financial assurance mechanisms set forth in subdivisions (a) to (e), inclusive, of California Code of Regulations, title 22, section 66265.143. Respondent may demonstrate and maintain financial assurances by means of a financial assurance mechanism other than those described above, if the alternative financial assurance mechanism has been submitted to, and approved by, the Department as being at least equivalent to the financial assurance mechanisms described above. The Department shall evaluate the equivalency of the proposed alternative financial assurance mechanism principally in terms of the certainty of the availability of funds for required corrective action activities and the amount of funds that will be made available. Respondent shall submit any information deemed necessary by the Department to make a determination regarding the equivalency of the proposed alternative financial assurance mechanism.

6. Cost Reimbursement

6.1. The Respondent agrees to pay: 1) all costs incurred by the Department for oversight activities, including, without limitation, review of documents provided by Respondent conducted prior to the effective date of the Consent Order; and (2) all costs incurred by the Department in providing oversight pursuant to this Term Sheet, including, without limitation, oversight of field activities. Costs incurred include, without limitation, interest on unpaid amounts that are billed and outstanding more than 60 days from the date of the invoice. The Department will bill Respondent quarterly. Respondent agrees to make payment within 30 calendar days of receipt of Respondent's billing.

6.2. In anticipation of oversight activities to be conducted, Respondent shall make an advance payment of $30,000.00 (thirty thousand US dollars) to the Department no later than 10 calendar days following the effective date of the Consent Order. It is expressly understood and agreed that the Department's receipt of the entire advance payment as provided in this Section is a condition precedent to the Department's obligation to provide oversight, review of, or comment on, documents. If the advance payment exceeds the Department's final costs, the Department will refund the difference within 120 days after the obligations set forth in this Term Sheet and accompanying attachments are satisfied.

6.3. All payments made by Respondent pursuant to this Term Sheet shall be by check payable to the "Department of Toxic Substances Control", and bear on its face the project code for the Site (401894-48) and the docket number of this Term Sheet. Upon request by Respondent, the Department may accept payments made by credit cards or electronic funds transfer. Payments by check shall be sent to:

Department of Toxic Substances Control Accounting Office
1001 I Street, 21st Floor
P.O. Box 806
Sacramento, California 95812-0806

A photocopy of the check shall be sent concurrently to the Department's Project Manager. The Department shall retain all cost records associated with the work performed under this Term Sheet and attachments as may be required by state law. The Department will make all documents that support the Department's cost determination available for inspection upon request in accordance with the Public Records Act, Government Code section 6250 et seq.

EXHIBIT A

Procedural Provisions

7. Respondent shall submit necessary documents and comply with the following requirements:
   7.1. California Environmental Quality Act (CEQA). In order to meet its CEQA obligation, the Department will prepare the necessary CEQA documents. If required, Respondent shall submit the information necessary for the Department to prepare these documents.
   7.2. Land Use Covenant. The Department shall determine whether a land use covenant (LUC) pursuant to California Code of Regulations, title 22, section 67391.1 is necessary to ensure full protection of the environment and human health. If the Department determines that an LUC is necessary for the protection of the environment and human health, Respondent will cooperate fully in working with the landowner to meet that requirement.
   7.3. Operation and Maintenance (O&M). Respondent shall comply with any and all operation and maintenance requirements in accordance with the any Interim Measure or corrective action, or O&M Plan. If deemed necessary, the Department may require Respondent to enter into an O&M Agreement with the Department.
   7.4. Health and Safety Plan. As part of any workplan required under this term sheet, Respondent will submit a Site Health and Safety Plan in accordance with California Code of Regulations, title 8, section 5192. This plan should include, at a minimum, the following elements:
      7.4.1.site background/history/workplan;
      7.4.2.key personnel and responsibilities;
      7.4.3.job hazard analysis/summary;
      7.4.4.employee training;
      7.4.5.personal protection;
      7.4.6.medical surveillance;
      7.4.7.air surveillance;
      7.4.8.site control;
      7.4.9.decontamination;
      7.4.10. contingency planning;
      7.4.11. confined space operations;
      7.4.12. spill containment;
      7.4.13. sanitation;
      7.4.14. illumination; and
      7.4.15. other applicable requirements based on the work to be performed.

      The Department's Interim Draft Site Specific Health and Safety Plan Guidance Document for Site Assessment/Investigation, Site Mitigation Projects, Hazardous Waste Site Work Closure, Post Closure, and Operation and Maintenance Activities (Department, December 2000) can be used as a reference tool. The Health and Safety Plan should cover all measures, including contingency plans, which will be taken during field activities to protect the health and safety of the workers at the Site and the general public from exposure to hazardous waste, substances, or materials. The Health and Safety Plan should describe the specific personnel, procedures, and equipment to be utilized.

      All contractors and all subcontractors performing work required under this Term Sheet shall be given a copy of the Health and Safety Plan prior to entering the Site. Any supplemental health

and safety plans prepared by any subcontractor shall also be prepared in accordance with the regulations and guidance identified above. The prime contractor responsible for this subcontractor will be responsible for ensuring that all subcontractor supplemental health and safety plans follow these regulations and guidelines.

7.5. Community Profile. Concurrent with the submission of an Interim Measures Workplan, where required, Respondent shall submit to the Department a Community Profile for Department approval in accordance with Attachment 1. Based on the information provided in the Community Profile, if the Department determines that there is a high level of community concern about the Site, the Department may require Respondent to prepare a Public Participation Plan.

7.6. Remedy Selection.

7.6.1. The Department will provide the public with an opportunity to review and comment on the final draft of the Site Investigation Report, any Department ordered corrective actions proposed for the Facility, and the Department's justification for selection of such corrective actions.

7.6.2. Following the public comment period, the Department may select final corrective actions or require Respondent to revise the Site Investigation Report and/or perform additional studies as necessary to support selection of a remedy, within the Department's authority.

7.6.3. The Department will notify Respondent of any final corrective action(s) selected by the Department in a document entitled Final Decision and Response to Comments. The notification will include the Department's reasons for selecting the corrective action(s).

7.7. Submittals.

7.7.1. Beginning with the fourth full month following the effective date of the Consent Order, Respondent shall provide the Department with quarterly progress reports of activities conducted pursuant to this Term Sheet. Progress reports are due on the 15th of the month when reports are due. The progress reports shall conform to the Scope of Work for Progress Reports contained in Attachment 2. The Department may adjust the frequency of progress reporting to be consistent with site-specific activities.

7.7.2. Any report or other document submitted by Respondents pursuant to this Term Sheet shall be signed and certified by the project coordinator, a responsible corporate officer, or a duly authorized representative.

7.7.3. The certification required above, shall be in the following form:

I certify that the information contained in or accompanying this submittal is true, accurate, and complete. As to those portions of this submittal for which I cannot personally verify the accuracy, I certify that this submittal and all attachments were prepared at my direction in accordance with procedures designed to assure that qualified personnel properly gathered and evaluated the information submitted.

Signature:
Name:
Title:
Date:

7.7.4. Respondent shall provide two copies of all documents, including but not limited to, workplans, reports, and correspondence of 15 pages or longer. Respondents shall provide

one copy in portable document format (pdf). Submittals specifically exempted from this copy requirement are all progress reports and correspondence of less than 15 pages, of which one copy is required.

7.7.5. Unless otherwise specified, all reports, correspondence, approvals, disapprovals, notices, or other submissions relating to this Term Sheet shall be in writing and shall be sent to the current Project Coordinators.

7.8. Calendar of Tasks and Schedule. Respondent shall comply with the schedule agreed to in Attachment 3. The Department may adjust the schedule based on circumstances at the Site to be consistent with site-specific activities.

8. Dispute Resolution

8.1. The parties agree to use their best efforts to resolve all disputes informally. The parties agree that the procedures contained in this Section are the required administrative procedures for resolving disputes arising under this Term Sheet. If Respondent fails to follow the procedures contained in this Section, it shall have waived its right to further contest the disputed issue. Respondent reserves its legal right to contest or defend against any final decision rendered by the Department under this Section. Disputes regarding Department billings shall follow the procedures set forth in Section 8.3.

8.2. Respondent shall first seek resolution with the Department's assigned project manager and unit chief. If the issue is not resolved after review by the unit chief, Respondent shall seek resolution with the Department branch chief by presenting in a letter the issues in dispute, the legal or other basis for Respondent's position, and the remedy sought. The branch chief shall issue a written decision with an explanation for the decision within thirty (30) business days after receipt of the letter from Respondent.

8.3. If Respondent disagrees with the branch chief's decision, Respondent may appeal to the Site Mitigation and Restoration Program Division Chief (Division Chief). To appeal to the Division Chief, Respondent must prepare a letter stating the reasons behind the disagreement. Attached to the letter shall be (a) Respondent's original statement of dispute, (2) supporting documents, and (3) copies of any responses prepared by the project manager, unit chief, and branch chief. This letter and attachments shall be sent to the Division Chief within ten (10) business days from the date of Respondent's receipt of the branch chief's response. The Division Chief or designee shall review Respondent's letter and supporting documents, consider the issues raised and render a written decision to Respondent within thirty (30) business days of receipt of Respondent's letter. The decision of the Division Chief, or designee, shall constitute the Department's final administrative decision on the issues in dispute.

8.4. If Respondent disputes a Department billing, or any part thereof, Respondent shall notify the Department's assigned project manager and attempt to informally resolve the dispute with the Department's project manager and branch chief. If Respondent desires to formally request dispute resolution with regard to the billing, Respondent shall file a request for dispute resolution in writing within 45 days of the date of the billing in dispute. The written request shall describe all issues in dispute and shall set forth the reasons for the dispute, both factual and legal. If the dispute pertains only to a portion of the costs included in the invoice, Respondent shall pay all costs which are undisputed in accordance with Section 6.3. The filing of a notice of dispute pursuant to this Section shall not stay the accrual of interest on any unpaid costs pending resolution of the dispute. The written request shall be sent to:

EXHIBIT A

Diane Sheridan
Accounting Administrator
Financial Planning and Contracting Services
Collections and Resolution Unit
Department of Toxic Substances Control
1001 I Street, 21st Floor
P.O. Box 806
Sacramento, California 95812-0806
diane.sheridan@dtsc.ca.gov

A copy of the written request for dispute resolution shall also be sent to the current Project Coordinators. A decision on the billing dispute will be rendered by the Accounting Administrator or other Department designee. All disputes regarding costs are subject to Health and Safety Code Division 20, Chapter 6.66.

8.5. The existence of a dispute shall not excuse, stay, or suspend any other compliance obligation or deadline required pursuant to this Term Sheet.

ATTACHMENT 1

COMMUNITY PROFILE OUTLINE

The following items should be included in the Community Profile:

SITE DESCRIPTION

- Description of proposed project.
- Map.
- Description of the site/facility location.
- Description of the surrounding land uses and environmental resources (including proximity to residential housing, schools, churches, etc.).
- Visibility of the site to neighbors.
- Demographics of community in which the site is located (e.g., socioeconomic level, ethnic composition, specific language considerations, etc.). This information may be found in local libraries (e.g., census records).

LOCAL INTEREST

- Contacts with community members - any inquiries from community members, groups, organizations, etc. (include names, phone numbers, and addresses on the key contact list).
- Community interactions - any current meetings, events, presentations, etc.
- Media coverage - any newspaper, magazine, television, etc., coverage.
- Government contacts - city and county staff, state and local elected officials.

KEY CONTACT LIST

- Names, addresses, and phone numbers of city manager, city/county planning department staff, local elected officials, and other community members with whom previous contact has been made.

PAST PUBLIC INVOLVEMENT ACTIVITIES

- Any ad hoc committees, community meetings, workshops, letters, newsletters, etc., about the site or similar activity.

KEY ISSUES AND CONCERNS

- Any specific concerns/issues raised by the community regarding the site/facility or any activities performed on the site/facility.
- Any anticipated concerns/issues regarding the site/facility.
- Any general environmental concerns/issues in the community.

Include the name of the Department's Public Participation Specialist (PP) reviewing the Community Profile and date of final review.

PP Review _____ **Date**_____

ATTACHMENT 2

SCOPE OF WORK FOR PROGRESS REPORTS

Progress Reports shall, at a minimum, include the following information:

1. A description of significant activities and work completed during the reporting period;

2. A summary of any findings made during the reporting period;

3. Summaries of all problems or potential problems encountered during the reporting period;

4. Actions taken and/or planned to rectify problems;

5. Projected work for the next reporting period;

6. A discussion of changes in key personnel that occurred during the reporting period;

7. Summaries of all contacts with representatives of the press, local community or public interest groups during the reporting period;

8. Summary of treatment system effectiveness, if applicable. Provide a comparison of treatment system operation to predicted performance levels (applicable only if there is an operating treatment system); and

9. If requested by the Department, the results of any sampling tests and/or other data generated during the reporting period.

ATTACHMENT 3

CALENDAR OF TASKS AND SCHEDULE

Activity	Schedule
Scoping Meeting	Within 10 days of execution date of Consent Order
Advance Payment	Within 10 days of execution date of Consent Order
Submit existing data	As requested by Department
Site Characterization Report prepared for the Port of Los Angeles, and all Exhibits, Tables and Figures	Within 10 days of execution of Consent Order
Submit Current Conditions Report	Within 60 days of execution of Consent Order
Submit report on per- and polyfluoroalkyl substances	Within 90 days of execution of Consent Order
Submit Comprehensive Site Investigation Workplan	Within 90 days of Department comment on the Site Characterization Report prepared for the Port of Los Angeles
Submit Site Investigation Report	Within 90 days of receipt of Site Investigation Workplan final laboratory data[1]
Department decision on Site Investigation Report	Within 100 days of receipt by Department. May include recommendation for further investigation or cleanup, no further action, or no further action with conditions
Submit Interim Measures Workplan	If required, within 90 days of the Department's written request
Submit Corrective Action Plan	If required, within 120 days of the Department's written request
Submit Community Profile	Concurrent with submission of Interim Measures Workplan
Submit CEQA documentation	Upon the Department's initial approval of any required cleanup plan for public review and comment
Public Review/Comment Period, mailing of fact sheet to site mailing list and placement of public notice.	Upon the Department's initial approval of a cleanup plan for public review and comment
Department decision on cleanup plan	The Department to approve a cleanup plan, if appropriate, after addressing public comments, within ~150 days of receipt of draft
Initiate cleanup	Within 90 days of Department approval of a cleanup plan, or as directed by Department in conjunction with Respondent[2]
Submit cleanup completion report	Within 150 days from the date of implementation of a cleanup plan
Submit Operation and Maintenance Plan	If required, as directed by Department
Operations and Maintenance Agreement	If required, as directed by Department

[1] If workplan activities are not initiated within 6 months of the date of Department approval, the Department may require additional investigation, public participation activities, and/or revision to the document.
[2] If cleanup plan activities are not initiated within 1 year of the date of Department approval, the Department may require additional investigation, public participation activities, or revision to the document.

Land Use Covenant	If required, as directed by Department
Invoices	Issued quarterly by Department
Cost estimate and Scope of Work Updates and Amendments	Updated by the Department quarterly, based on work needed to complete the Term Sheet. Amendments are issued on an as-need basis.
Submit progress reports of activities conducted pursuant to Term Sheet	Quarterly, due on the 15th of the month, beginning with the fourth month following the execution of the Consent Order

Appendix E2

Off-Site Light Fibrous Material Investigative Work Plan (Amended)

OFF-SITE LFM INVESTIGATION WORK PLAN (AMENDED)

SA RECYCLING LLC
901 NEW DOCK STREET
TERMINAL ISLAND, CALIFORNIA

Prepared for:

SA Recycling LLC
901 New Dock Street
Terminal Island, California 90731

Prepared by:

GSI Environmental Inc.
19200 Von Karman Avenue, Suite 800
Irvine, California 92612
949.679.1070

GSI Job No. 6013
Issued: 22 April 2022

Job No. 6013

This work plan was prepared by the staff of GSI Environmental Inc., under the supervision of the Geologist(s) and/or Engineer(s) whose signature(s) appear hereon.

The findings, recommendations, specifications, or professional opinions were prepared in accordance with generally accepted professional engineering and geologic practice. No warranty is expressed or implied.

Timothy F. Wood, PG, CHG
Principal Geologist

Timothy S. Simpson, PE, GE
Principal Engineer

Robert Scofield, MPH, D.Env.
Principal Toxicologist

Kenia Whitehead, PhD
Senior Aquatic Scientist

OFF-SITE LFM INVESTIGATION WORK PLAN (AMENDED)
SA Recycling LLC
901 New Dock Street, Terminal Island, California

TABLE OF CONTENTS

1.0 INTRODUCTION 1
1.1 Purpose 1
1.2 Definition of LFM 1
1.3 DTSC 2021 LFM Sampling and SOV 2
2.0 SITE BACKGROUND 2
2.1 Site Location 2
2.2 Site Conditions 2
2.2.1 Site Geology and Hydrogeology 3
2.2.2 Surface Water 3
2.2.3 Meteorology 3
2.3 Land Use History 3
2.4 Site Permitting 4
3.0 SUMMARY OF PAST DREDGING IN THE CERRITOS CHANNEL 5
4.0 SITE OPERATIONS 5
4.1 Site Description 5
4.2 Facility Operations 6
4.2.1 Feedstock and De-Pollution 6
4.2.2 Shredding and Metal Recovery 7
4.2.3 Shredder Residue Stabilization and Disposal 7
4.2.4 Equipment Maintenance and Fueling 7
4.3 Previous Site Investigations 7
4.3.1 Free Product in Groundwater 8
4.3.2 Groundwater Monitoring 8
4.3.3 Soil Remediation 9
4.4 Facility Improvements 9
4.4.1 Previous Facility Improvements 9
4.4.2 SA Recycling Improvements 9
4.4.3 SA Recycling Air Pollution Control 10
4.5 Surface Water Management 10
4.6 Waste Management 11
5.0 LFM INTERIM INVESTIGATION AND CLEANUP 12
5.1 Interim LFM Investigation and Cleanup Sampling Results 13
5.2 Characteristics of LFM 14

6.0 CONCEPTUAL SITE MODEL 16
6.1 Potential Releases and Point Sources 17
6.2 Potential Constituents of Concern 17
6.3 Environmental Migration Pathways 18
6.4 Exposure Routes 18
6.5 Potential Receptors 19
6.5.1 Potential Human Receptors 19
6.5.2 Ecological Receptors 20
6.6 Data Gaps 20
7.0 PROPOSED SCOPE OF WORK 21
7.1 On-Wharf and Upland Off-Site Reconnaissance 21
7.2 On-Wharf and Upland Sampling Strategy and Rationale 21
7.3 On-Wharf and Upland Sampling and Analysis Plan 21
8.0 EQUIPMENT DECONTAMINATION 22
9.0 WASTE CHARACTERIZATION MANAGEMENT AND DISPOSAL 23
10.0 DATA EVALUATION AND REPORTING 23
10.1 On-Wharf and Upland Sediment Data Evaluation 23
10.2 Marine Sediment Data Evaluation 23
10.3 Reporting 24
11.0 PROJECT MANAGEMENT AND SCHEDULE 25
11.1 Personnel And Qualifications 25
11.2 Schedule 26
12.0 REFERENCES 27

Figures

Figure 1. Site Location Map
Figure 2. Site Map
Figure 3. Sample Locations
Figure 4. Site Stormwater Management Map
Figure 5. Conceptual Site Model
Figure 6. Off-Site Investigation Area

Appendices

Appendix A. Port of Los Angeles Dredging Figures
Appendix B. Off-Site LFM Interim Cleanup and Sampling Results Technical Memorandum
Appendix C. Health and Safety Plan
Appendix D. SA Recycling, Terminal Island Marine Sediment Investigation Work Plan

OFF-SITE LFM INVESTIGATION WORK PLAN (AMENDED)
SA Recycling LLC, Terminal Island
901 New Dock Street, Terminal Island, California

1.0 INTRODUCTION

On behalf of SA Recycling LLC (SA Recycling), GSI Environmental Inc. (GSI) has prepared this Amended Investigation Work Plan (Investigation Work Plan) to investigate the potential presence of light fibrous material (LFM) originating from the SA Recycling scrap metal shredding and recycling facility located at 901 New Dock Street, on Terminal Island, California (referred to as the "SATI recycling facility" and the Site; Figure 1). Pursuant to direction from legal counsel, this workplan is focused on LFM.

1.1 Purpose

The purpose of this Investigation Work Plan is to evaluate the actual or potential presence and impacts of offsite LFM. This document amends a prior Investigation Work Plan prepared by GSI and submitted to the California Department of Toxic Substances Control (DTSC) on 03 December 2021.

As required by DTSC, a separate Amended LFM Cleanup/Removal Work Plan (Cleanup Work Plan) was also prepared by GSI and accompanies this Work Plan under separate cover.[1] These work plans were prepared to address requirements of the DTSC's 30 September 2021 Summary of Violations (SOV), and relevant comments presented in DTSC's 28 January 2022 letter to SA Recycling regarding the 3 December 2021 amended work plans.

1.2 Definition of LFM

In its DTSC 28 January 2002 comments, DTSC requested inclusion of the following definition of LFM:

"LFM is material produced during the metal shredding process which can be uncontrollably dispersed offsite due to wind, rain, or other factors if the LFM not adequately managed. LFM resulting from metal shredding operations typically consists of residues such as glass, rubber, automobile fluids, dirt, and plastics from shredded car dashboards, car seats, other non-metallic car parts, household appliances, and other sources. Samples of LFM have been shown to meet the criteria for hazardous waste in California due to concentrations of metals at levels exceeding the toxicity criteria defined in California Code of Regulations, title 22, section 66261.24(a)(2)(A)."

Unless wetted or properly contained, LFM may be susceptible to dispersion. If dispersed, LFM can mix with sediment, debris, trash, and vegetation, becoming matted and less mobile.

[1] GSI, 2022, Off-Site LFM Cleanup/Removal Action Work Plan (Amended), SA Recycling LLC, 901 New Dock Street, Terminal Island, CA, 22 April.

1.3 DTSC 2021 LFM Sampling and SOV

On 1 September 2021, DTSC collected eight samples of suspected LFM deposits on the Pasha Stevedoring & Terminals, LP (PST) facility, the results of which are presented in DTSC's 1 October 2021 Sampling Report (DTSC, 2021). The PST facility is adjacent to the east of the SATI recycling facility (Figure 2). The DTSC sample locations are designated as SATI-BF-01 through SATI-BF-08 and are shown on Figure 1.

The reported concentrations of zinc exceeded the Total Threshold Limit Concentration (TTLC) of 5,000 milligrams per kilogram (mg/kg) in six of the eight samples and the concentration of lead exceeded the TTLC of 1,000 mg/kg in five of the eight samples. None of the samples collected exceed the TTLC for cadmium. Soluble metals analysis reported lead and zinc concentrations above their Soluble Threshold Limit Concentrations (STLCs) in each of the eight samples and cadmium above its STLC in six of the eight samples. No samples exceeded Toxicity Characteristic Leaching Procedure (TCLP) limits for lead, zinc or cadmium. Polychlorinated biphenyls (PCBs) as Aroclors were reported in seven of the eight samples at concentrations between 0.87 and 3.09 mg/ kg; PCBs were not detected in sample SATI-BF-08. DTSC's sampling results are summarized on the attached Tables 1 and 2.

Following DTSC's 1 October 2021 sampling report, DTSC issued a Summary of Violations (SOV) on 30 September 2021 to SA Recycling. The SOV required preparation of an investigation workplan and a separate cleanup workplan.

2.0 SITE BACKGROUND

The SATI recycling facility operations include shredding automobiles, appliances, and other scrap metal materials. The facility location, surface water and meteorological conditions, Site use history, and regulatory oversight are presented in this section.

2.1 Site Location

The SATI recycling facility is located at 901 New Dock Street, on Terminal Island in the Port of Los Angeles, California (Figure1). The Site consists of 27 acres, making up Berths 210 and 211 along the Cerritos Channel on the northern portion of Terminal Island (Figure 2). The facility is within an industrial area of the port, bounded by a shipping container terminal to the west, a bulk cargo handling, stevedoring and vessel loading and unloading facility to the east, and New Dock Street and railroad right-of-way to the South. A recreational marina is located across the Cerritos Channel to the northeast, and other industrial areas are located across to the north and northwest. The Yusen Terminals LLC (YTI) East and PST terminal facilities are located to the east of the SATI recycling facility (Figure 2).

2.2 Site Conditions

The Site geology and hydrogeology, Site surface water features, and meteorology are described below.

2.2.1 Site Geology and Hydrogeology

The Site subsurface consists of a combination of dredged marine sediments, debris, and marine deposits, as discussed in Section 2.3. Soils present are predominantly silts with some fine sands and clays. Slug tests from a 3-day tidal study indicated that the average hydraulic conductivity was 13.1 feet per day (Clayton Environmental, 1997).

Depth to groundwater below grade in 2020 was reported between 6.27 and 10.54 feet. with a relatively flat hydraulic gradient of 0.007 and 0.008 towards the northeast. These values are consistent with historical reports of depth to water and hydraulic gradient (EarthCon, 2020).

The regional Gaspur Aquifer is approximately 100 feet below grade in the vicinity of the Site and the shallow groundwater at the Site is classified as saline and not considered potable water (DWR, 1961) (EarthCon, 2015).

2.2.2 Surface Water

The Port of Los Angeles and adjoining Port of Long Beach are located within San Pedro Bay where the Los Angeles River meets the Pacific Ocean. As shown on Figure 1, Terminal Island is located in the northern portion of the bay, is oriented approximately southwest to northeast, and is surrounded by navigation channels to the west (Main Channel), north (East Basin Channel), and east (Back Channel).

2.2.3 Meteorology

During the spring, summer, and early fall, the predominant wind direction at Terminal Island is from the Pacific Ocean from the southwest, with occasional winds from the northwest. During late fall and winter months (November, December, and January), the predominant wind direction is from the northwest, with occasional wind originating from the southwest. Wind speed is typically below 15 miles per hour; however, it can exceed 20 miles per hour. Two representative wind roses for the period 20 September 2016 to 30 July 2021 are shown on Figure 2. Wind stations are located at the Port of Los Angeles Pier 400 and Pier S (south and east of the SATI recycling facility).

2.3 Land Use History

The Port of Los Angeles originally consisted of tideland and coastal islands. The area was built up through dredging and filling operations starting in the early 1900s. The Site appears to have been mostly in its natural state prior to World War II. During World War II, the Site and nearby area was built up as dry dock berths where California Ship Building Corporation constructed naval vessels (dry dock Berths 209 through 214) (RWQCB, 1996). The Site occupies Berths 210 and 211 (POLA, 2022).

In 1946, the dry docks at Berths 210 and 211 were dismantled and the area was filled with dredged sediments from the Cerritos Channel. After the war, National Metals and Steel Corporation began dismantling ships and processing scrap metal on backlands of Berths 207 through 213 until 1962 (RWQCB, 1996).

The Site was leased in 1962 by Hugo Neu Corporation and Proler Steel Corporation doing joint business as Hugo Neu-Proler Company. Prior to the lease and after the lease, the

Port of Los Angeles used large quantities of imported fill material and dredged sediment from the adjacent harbor to fill in and level the Site (RWQCB, 1996).

Upon leasing the Site, Hugo Neu-Proler Company constructed a plant facility for the purpose of processing scrap steel for sale to Japan (Hugo Neu Corporation v. County of Los Angeles, 1970). In 1966, a wharf was constructed at Berth 210 along the channel and a large portion of the backland area was paved with asphalt (RWQCB, 1996). The Site was fully paved in 2002, following Site soil remediation (RWQCB, 2012).

Sims Group Ltd acquired the recycling operations from Hugo Neu-Proler Company on October 31, 2005; a new subsidiary company Sims Hugo Neu West was created in December 2005. On September 1, 2007, the Sims Group and Adams Steel formed a joint venture creating SA Recycling LLC. SA Recycling has continued operating the scrap-metal recycling activities at the Site to the present (Harris & Associates, 2021).

2.4 Site Permitting

SA Recycling operates the facility under Permit No. 750 approved by the Los Angeles City Council in 1996. The recycling facility (under Hugo Neu-Proler Company) provided an Environmental Impact Report (EIR) that was certified by the Port of Los Angeles in 1996. The EIR accompanied a lease renewal extending through 2024 and analyzed the environmental impacts of the proposed lease while detailing planned improvements and operational changes to the facility (Harris & Associates, 2021). Operation and improvements are discussed in Section 4.0.

An addendum to the 1996 EIR was prepared by SA Recycling in 2021 and submitted to the City of Los Angeles Harbor Department. The addendum accompanies a proposed project that includes a 5-year lease extension to 2029 (Harris & Associates, 2021).

The facility filed a Notice of Intent (NOI) under the Statewide General Permit for Storm Water Discharges Associated with Industrial Activity (General Permit No. CAS000001), adopted by the State Water Resources Control Board (SWRCB) April 1st, 2014, Order No. 2014-0057-DWQ (Harris & Associates, 2021) and was assigned a Waste Discharge Identification (WDID) of 419I021125. Stormwater management is discussed in Section 4.5.

Air permits issued by the South Coast Air Quality Management District (South Coast AQMD) include “permits to operate” for the shredder (R-G27565), the metals recovery plant (R-G18947), and the shredder air pollution control system (APCS) (R-G27566) (Harris & Associates, 2021). Air quality management is described in Section 4.4.

The Los Angeles Regional Water Quality Control Board’s (LARWQCB) Waste Discharge Requirements (WDR) Order No. 96-020 (File No. 90-47) was issued on April 1, 1996 for on-Site burial of fixated contaminated soil from a diesel fuel spill (Section 4.3) (RWQCB, 1996). Because the excavated soil was not buried on-Site and was instead transported off-Site for disposal, the WDR was terminated on April 7, 2012 (RWQCB, 2012) (Harris & Associates, 2021). As described in Section 4.3.1, free-product removal is ongoing at the Site.

3.0 SUMMARY OF PAST DREDGING IN THE CERRITOS CHANNEL

In April 2013, the Port of Los Angeles and United States Army Corps of Engineers completed a 10-year channel deepening project (USACE, 2013). The project included deepening the port's Main Channel, East Bay Channel, and the Cerritos Channel (along which the SATI recycling facility is located) from a depth of 45 feet to 53 feet below the mean lower low water elevation (MLLW). A figure from the 2008 Port of Los Angeles Draft SEIS/SEIR report showing the deepening project area is included in Appendix A.

Additionally in 2016, dredging was proposed at Berths 210 and 211 to a maintenance depth of 37 feet below MLLW with a 2-foot overdredge allowance (Amec, 2016). The proposed maintenance dredging footprint is relatively small, measuring 0.385 acres, and is shown in Appendix A. The estimated volume to be dredged was estimated at 1,750 cubic yards with a possible 1,340 cubic yards in overdredge volume representing a 3 to 6 feet sediment removal (Amec, 2016). GSI has not identified an implementation report for this activity.

4.0 SITE OPERATIONS

The SATI recycling facility operations are described in this section, including the Site stormwater management, and potential chemicals of concerns.

4.1 Site Description

SA Recycling operates a scrap metal recycling facility at Berths 210 and 211 of the Port of Los Angeles. Scrap metal is transported to the Site where it is sorted, shredded or sheared, then stockpiled and loaded into ships for transport overseas.

Figure 2 shows the SATI recycling facility structures and features. The Site is accessed via New Dock Street, which runs south of the Site boundary. A driveway from New Dock Street leads trucks and vehicles to the property entrance. Three buildings are located at the southern portion of the Site: a small main office building located next to a scale house for incoming trucks, a nearby facility warehouse with adjoining parking lot for staff and visitors, and the facility shop.

The shredder is located in the western portion of the Site; the shredder is contained inside a covered structure and connected by conveyors to various sorting and picking stations where ferrous materials are separated. A separate metal recovery plant (MRP) for non-ferrous sorting is located in the southern portion of the Site. A crane loading area is located along the waterfront at the northern Site boundary. A change room building and a ferrous shear structure are located in the center of the Site.

The Site stormwater treatment system is discussed in Section 4.5. The stormwater treatment system is located next to the warehouse building and is supplied by five surface water basins with pump stations that are spaced along the Site western and eastern perimeters. A sixth surface water basin is located along the eastern Site boundary but does not convey water to the treatment system. A hazardous waste storage area is located within the facility shop building. A welding area is located in the southwest corner of the Site, and a 107,000-gallon diesel tank at the east Site boundary within a containment area. The southeastern Site portion is used for vehicle depollution and maintenance/equipment washing (discussed in Section 4.2).

Various stockpiles around the Site are used for material to be shredded, or feedstock, and shredded or sorted material. In general, stockpile areas are open or in some cases contained with steel walls. The Site has been fully paved since 2002, except for small areas of landscaping in the parking and walkway areas south of the southern buildings at the entrance to the Site.

Chemical storage areas located at the stormwater treatment area, the welding area, the warehouse, the diesel tank, and the ferrous shear area. Waste storage at the Site is discussed in Section 4.6.

4.2 Facility Operations

Under the approved project Permit No. 750 from the City of Los Angeles, the facility is authorized for up to 1.3 million gross tons of throughput, 300 transactions (or deliveries) per day, 164 employees, and up to 41 vessels call per year, among other operating conditions. Recent operations are consistent with the permit, showing 840,000 to 1.2 million gross tons of throughput, truck deliveries ranging from 100 to 250 per day, and 24 to 36 vessel calls (Harris & Associates, 2021).

No operational changes or increases were proposed in the 2021 EIR Addendum for lease renewal. Public facility operational hours are Monday through Friday from 6:00 am to 6:00 pm and on Saturday from 6:00 am to 3:00 pm (Harris & Associates, 2021). However, shredding operations currently are performed between the hours of 8:00 pm and 2:00 am, as requested by the City of Los Angeles to avoid peak power grid demand.

4.2.1 Feedstock and De-Pollution

Feedstock arrives on-Site by truck and consists of end-of-life products that are primarily composed of metal. Feedstock at the SA recycling facility includes vehicles, consumer and industrial appliances, construction and demolition materials, manufacturing scrap, curbside collection scrap, and consumer/homeowner scrap. Feedstock material may come from feeder yards that sort, bale, and shear the material to compress it for ease of transport. In 2019, the feedstock was reported to consist of 42.16% automobiles, 43.63% appliances, and 14.21% miscellaneous (Harris & Associates, 2021).

Passenger vehicles typically arrive already depolluted and crushed. Large busses and commercial trucks do not arrive depolluted and are depolluted before being cut or shredded. De-pollution is necessary for a small number of vehicles prior to shredding. Vehicle processing is conducted in the facility de-pollution area, located along the eastern Site boundary, shown on Figure 2. De-pollution materials at the SA recycling facility (e.g., removed waste oil, batteries, waste coolant, oil absorbent pads, anti-freeze mercury switches) are containerized and stored at the Site in a designated covered area with secondary containment and are shipped off-Site for proper disposal.

Some scrap received by the facility is processed by stationary shear to reduce the size of received scrap metal. The shear area has containment features to prevent material dispersion along with procedural safeguards such as regular sweeping/housekeeping (SA Recycling, 2021).

SA maintains an Acceptance Policy that requires all SA facilities to reject a list of materials that would be considered hazardous. All incoming material is inspected prior to

processing. All identified prohibited material discovered after receipt is stored at the Site in a designated area and shipped off-Site for proper disposal.

4.2.2 Shredding and Metal Recovery

Feedstock material is stockpiled at the southern end of the shredder assembly and conveyed into the covered shredder building. The facility shredder is a 9,000-horsepower hammer-mill. The shredder reduces feedstock into small pieces that facilitate downstream sorting. Shredder aggregate is a mixture of recoverable ferrous and non-ferrous metals, as well as non-metal components.

Ferrous metals are separated from the aggregate in a covered structure using magnets. Recovered ferrous metals and the remaining non-ferrous aggregate are conveyed to separate stockpile areas north of the shredder.

Stockpiled non-ferrous aggregate is moved to the Site metal recovery plant where the material undergoes various separation processes to remove remaining non-ferrous metals. Recovered metal materials are sorted and stockpiled on Site for eventually loading to ships and transport overseas. All incoming shredder feed stock is completely shredded each following shift. The facility has up to 100,000 tons of ferrous and nonferrous scrap metal on-site at any given time (Harris & Associates, 2021).

4.2.3 Shredder Residue Stabilization and Disposal

The residue remaining after non-ferrous aggregate processing is generically called Metal Shredder Residue (MSR). It is also referred to as Auto Shredder Residue or ASR by the recycling industry. MSR at the facility consists primarily of plastics, rubber, glass, dirt, and other debris (SA Recycling, 2021). Foam and textiles (fabrics, carpet, wool) are also typically included in the contents of MSR (Duranceau and others, 2011). The MSR left after shredding and sorting makes up approximately 20% of automobiles and 27% of appliances (Rosegay, 2014).

Stabilization of MSR is performed to reduce solubility of potential remaining metals. MSR is thoroughly wetted with liquid silicate and mixed with an alkaline activator, such as cement powder, in a pugmill (DTSC, 2021). The resulting treated residue is transported off-Site for disposal as non-hazardous material.

4.2.4 Equipment Maintenance and Fueling

Currently, the diesel AST is used for fueling Site heavy equipment used in recycling operations. There is also an oil and lube station and associated clarifier at the maintenance area in the eastern portion of the Site.

4.3 Previous Site Investigations

Formerly, a fueling station was present between the main office building and the warehouse. The station provided gasoline via two 1,000-gallon underground storage tanks (USTs) and diesel via a 700-foot underground pipeline connected to a 173,000-gallon diesel above ground tank (AST) located near the shop building (formerly the smelter building). In 1988, leakage from the diesel fuel line was discovered.

4.3.1 Free Product in Groundwater

A free-phase hydrocarbon plume in groundwater was delineated in 1997 centered at the fueling station measuring about 90 feet long by 60 feet wide, extending from the fueling area to the warehouse.

The free-phase petroleum volume was estimated at between 2,934 and 5,100 gallons in 1995 (Clayton Environmental, 1997), decreasing to 1,994 gallons by 2015 (EarthCon, 2015) due to removal activities via passive skimmers, hand bailing, and absorbent socks. Free product removal is ongoing with weekly measurements of light non-aqueous phase liquid (LNAPL) thickness and quarterly reports to LARWQCB of LNAPL recovery volumes (Harris & Associates, 2021).

4.3.2 Groundwater Monitoring

Groundwater monitoring was required in the 1996 WDR to evaluate groundwater for potential release related to soil material that was to be fixated and buried on-Site. Groundwater monitoring has been ongoing since 1997 with semi-annual progress reports submitted to LARWQCB. After the WDR was rescinded in 2012, groundwater monitoring was reduced from eight to five monitoring wells located at the office and warehouse. In addition, analysis was reduced to total petroleum hydrocarbons in the gasoline, diesel, and motor oil ranges, and volatile organic compounds (VOCs).

Previously, groundwater samples were also analyzed for total recoverable petroleum hydrocarbons (TRPH), semi-volatile organic compounds (SVOCs), PCBs, PAHs, metals, and general parameters (chloride, sulfate, turbidity, pH, and total dissolved solids). The last set of groundwater samples analyzed for the extended WDR analytical suite, dated December 2011, showed the following results (EarthCon, 2012):

- no TRPH detected;
- no SVOCs detected;
- no PAHs detected;
- PCBs detected in MW-1: Aroclor 1248 and 1254 at concentrations of 2.1 and 1.8 µg/L, respectively;
- Antimony, arsenic, barium, copper, lead, molybdenum, vanadium, and zinc were detected in monitoring wells.

The most recent available groundwater monitoring report (June 2020 sampling) shows the following were detected (EarthCon, 2020):

- Total petroleum hydrocarbons as gasoline (TPHg), diesel (TPHd), motor oil (TPHm); up to 2,300 µg/L (TPHm); and
- VOCs, up to 16 µg/L (MTBE)
    - isopropylbenzene
    - methyl-tert-butyl-ether (MTBE)
    - tert-butyl alcohol (TBA)
    - 1,1-dichloroethane (1,1-DCA)
    - 1,1-dichloroethene (1,1-DCE)
    - 1,2-dichloroethane (1,2-DCA), and
    - vinyl chloride.

Low concentrations of MTBE and TBA in soil at the Site were attributed to an off-Site source during Site characterization in 1994 (Harris & Associates, 2021).

4.3.3 Soil Remediation

LARWQCB reports that several soil investigations were conducted between 1990 and 1994, showing vadose zone soils impacted mainly by petroleum hydrocarbons and metals, but additionally by PCBs and PAHs within the upper 2 feet (RWQCB, 1996).

Low concentrations of MTBE and TBA were also detected in soils but were attributed to an unknown off-Site source during the 1994 Site characterization investigation by Mittelhouser Corp. (Harris & Associates, 2021).

From 1999 to 2002, soils impacted above cleanup levels were excavated, and soil confirmation sampling was completed with the oversight of the Port of Los Angeles and LARWQCB. Approximately 80,000 cubic yards of soil were excavated and transported off-site for disposal. Excavated areas were backfilled, graded, and capped with concrete. Areas without excavation were also paved so that the entirety of the Site is paved. The WDR was terminated on April 7, 2012 (Harris & Associates, 2021).

4.4 Facility Improvements

Fundamental operations today are generally similar to the operations when Permit No. 750 was approved in 1996. However, the specific nature of the operations has been significantly improved by SA Recycling, as described in Sections 4.4.2 and 4.4.3. Surface water containment and treatment is discussed in Section 4.5.

4.4.1 Previous Facility Improvements

Subsequent to the 1996 lease extension, the USTs at the Site fueling station were replaced with new ASTs and new dispensing lines. Similarly, the diesel storage tank was replaced, and new dispensing equipment installed (Harris & Associates, 2021).

In addition, as mentioned in Section 4.3.3, the Site was fully paved by the end of soil remediation activities in 2002. Since at least 2002, the Site has been separated from YTI East by a container wall along the north portion of the Site's eastern boundary, corresponding to the location of stockpiled material. The container wall is constructed of three containers stacked vertically and placed end-to-end, which is approximately 25.5 feet tall (Harris & Associates, 2021).

4.4.2 SA Recycling Improvements

Prior to SA Recycling operating at the Site, the shredder operated without enclosure or cover. SA Recycling has fully enclosed the shredder. SA Recycling has implemented numerous other improvements to contain recycling operations and control airborne migration of shredder material, including:

- Enclosure of the shredder, downstream conveyers aggregate conveyers and material recovery processes;
- Use of Aquatic Metal Separation System;
- Maintaining smaller material stockpiles;
- Increased the height of perimeter fencing;

- Installed plastic curtains on storage buildings;
- Installed fabric mesh on building roof vents;
- Installed drapes on conveyer terminals;
- Increased use of water to keep in-process materials wet;
- Increased water usage for dust control;
- Wetting of incoming material;
- Wetting of in-process material;
- Application of water during loading;
- Additional housekeeping around yard operations;
- Increased use of mechanical sweepers;
- A vacuum sweeper truck to clean the entrances and driveways in the yard throughout the day; and
- Water applied throughout the day to the yard, haul roads, and material piles to reduce dust generation.

General improvements to the storage and handling of shredder-related materials are discussed in Section 4.6.

4.4.3 SA Recycling Air Pollution Control

SA Recycling has implemented a variety of measures to prevent emissions from the shredder and related processes (Harris & Associates, 2021).

- A 2007 air pollution control system was installed at the shredder, consisting of:
  - filtering unit to remove moisture and particulates;
  - regenerative thermal oxidizer where VOCs are destroyed; and
  - chemical scrubber where a caustic solution precipitates chlorofluorocarbons (CFCs).
- Shredder containment building.

The facility operates under air permits listed in Section 2.4. During the original lease extension in 1996, the certified EIR determined that Site operations would be consistent with the 1991 Air Quality Management Plan and would not interfere with the scheduled attainment of air quality standards for the region. Although the Air Quality Management Plan was updated in 2016, the SA Recycling approved lease and operations extend to 2024 and would have been accounted for in the South Coast AQMD and Southern California Association of Governments (SCAG) emission inventory forecasts. A 5-year lease extension (from 2024 to 2029) was requested by SA Recycling in 2021, which did not include operational changes and does conflict with or obstruct the implementation of applicable air quality plans (Harris & Associates, 2021).

4.5 Surface Water Management

The Site's 1996 certified EIR included implementation of a stormwater collection and treatment system (Harris & Associates, 2021). A Site Storm Water Pollution Prevention Plan (SWPPP) has been in place at the Site since the 1990s (RWQCB, 1996) and the most current SWPPP is dated 5 April 2021 and as required by General Permit No.

CAS000001, is posted on the California State Water Resources Control Board's Stormwater Multiple Application & Reporting Tracking System (SMARTS).

Stormwater is collected in five integrated basins located throughout the facility, with a total capacity of approximately 90,000 gallons; a sixth basin receives stormwater but retains this water for reuse in the MRP (Figure 4). The five integrated basins are equipped with automatic pumps, triggered by float-switches. The five integrated basins are pumped to the on-site Stormwater Treatment System.

Ten (10) 42,000-gallon tanks located on-site are available for storage and sedimentation; four (4) of these are permanently dedicated to stormwater. The six remaining tanks are available if rain volumes and intensity require additional storage.

Runoff treated through the clarifiers is conveyed to a 10,000-gallon holding tank, from which water may be treated further and discharged, or returned to the storage tanks for reuse.

As a result of the large volume of onsite stormwater storage, runoff from most rain events is reused onsite. When discharges occur, treated stormwater is discharged to one of two storm drains near the facility entrance and on adjacent Port of Los Angeles property. Both drains connect to the Cerritos Channel. Storm water sediment is hauled away by a licensed and permitted hazardous waste company (Amberwick Corporation). A roll off bin is delivered to the facility no less than once every 90 days and filled with dried storm water sediment (Harris & Associates, 2021).

4.6 Waste Management

The following industrial materials are listed in the Site SWPPP (SA Recycling, 2021).

- Ferrous and non-ferrous scrap metal
- Diesel fuel
- Gasoline fuel
- Hydraulic oil
- Waste oil
- Non-RCRA hazardous waste (oily absorbent, anti-freeze, etc.)
- Lead-acid batteries
- PCB capacitors
- PCB ballasts
- Alkaline batteries
- Waste coolant
- Lubricating oil
- Treated ASR
- Spent dust collector filters
- Sodium hydroxide (25%)

The facility has implemented various best management practices to address wastes generated on-Site. Aggregate and metal-shredder residue storage bays are covered. The storage of maintenance materials, waste materials, and hazardous materials is done within areas with containment (SA Recycling, 2021).

The facility has waste management protocols which include:

- sweeping to prevent material tracking and dust generation, especially in traffic areas and in loading/unloading areas;
- wetting down the facility grounds for dust control;
- performing timely cleanup of debris, waste, spills, tracked material;
- segregating and organizing material stores;
- capturing all rinse/wash water in dedicated sumps and disposing of any residual solids;
- covering or containerizing non-solid materials and wastes (powders, particulates, shredded paper);
- isolating stormwater conveyance system from industrial material stores;
- performing regular equipment inspection and maintenance; and
- providing regular staff training for Site management and spill/leak response.

Materials managed for off-Site removal by recycling or as waste by SATI are:

- Unleaded gasoline and diesel fuel;
- Used anti-freeze and used oil;
- Sweepings;
- Stormwater sediment;
- Sodium hydroxide solids;
- Oily water;
- Oily absorbent/debris/dirt/filters; and
- Treated ASR.

5.0 LFM INTERIM INVESTIGATION AND CLEANUP

Following DTSC's October 2021 issuance of an SOV, GSI performed an interim investigation and LFM removal at the YTI East and PSAT areas that were the subject of DTSC's September 2021 SOV. Work was performed as described in GSI's December 3, 2021 Amended Off-Site LFM Cleanup/Removal Work Plan approved for interim cleanup activities by DTSC on December 17, 2021.

Interim investigation and cleanup were performed from October 2021 to April 2022 on the adjacent YTI East and PST facilities east of the Site. Findings and cleaning are summarized in the Off-Site LFM Interim Cleanup and Sampling Results technical memorandum (Interim Cleanup Memorandum) attached as Appendix B. Results of the data collected are discussed below. Based on the interim investigation observations performed on YTI East and Pasha wharf area, aged LFM was observed at the south end of an abandoned, below-grade concrete crane track bed, north along the rail bed, south of the end of the rails at a storm grate next to the PST east wall, and along the east side of the eastern SATI recycling facility wall.

LFM was not observed in open areas except sporadically in locations where it had historically accumulated co-located with physical obstructions, including vegetation growth and pavement erosional features.

Along the PST wharf, some LFM was present mixed with on-wharf sediment along a single rail running parallel to the wharf, and LFM mixed with on-wharf sediment was also observed at the PST west boundary with the SATI recycling facility. Utility vaults are located along the northern PST facility/wharf boundary. Including the vault sampled by DTSC (SATI-BF-08), which is located approximately 220 feet east-northeast of the SATI property line, GSI was able to access and clean 31 vaults along the PST wharf, which are located west and east of the SATI-BF-08 location. Varying amounts of aged LFM was observed in these utility vaults. Two additional vaults were inaccessible along the PST wharf due to vault cover issues.

The LFM present in the southern end of the YTI truck washes on 6 October 2021 was observed to be moist and spongy with moss, algae, or other vegetation growth. The deposit did not appear to be recent due to sun-bleached and damaged trash and debris co-located and on top of it, along with entangled vegetation within the LFM. Other LFM observed was similar. The LFM generally appeared as matted deposits with varying amounts of vegetation, on-wharf sediment, and trash/debris. In many locations, moss or other green growth was present on the matted LFM. The LFM appeared to be stable, consistent with historical accumulation in isolated wind shadows. Vegetation growth was entangled with LFM at some locations, indicating the LFM had been in place for a period of years.

5.1 Interim LFM Investigation and Cleanup Sampling Results

Sampling was conducted across the YTI East terminal and eastward along the PST facility wharf. As described in Appendix B, LFM and/or on-wharf sediment that may or may not have contained LFM was removed from YTI and the PST vaults and PST waterfront rail for disposal. Prior to removal, samples were collected from each location. The targeted interim removal was initiated on 23 October 2021, due to the potential for significant rainfall impacting recently disturbed areas from the recent sampling events. Interim removal and control measures were completed for localized areas. Under GSI's direction, Innovative Construction Solutions of Costa Mesa, California (ICS) used portable vacuums with high efficiency particulate air (HEPA) filters, shovels/trowels, and brooms to clean accumulated material from the storm drain in the southwest portion of the PST facility. Loose on-wharf sediment in other areas disturbed by the recent sampling events were either removed or stabilized by covering with plastic sheeting and sandbags. As noted above, specific removal actions for each location were completed. A photo log of sample locations is provided as part of the Interim Cleanup Memorandum included as Appendix B.

Figure 3 shows the sample locations. All samples were analyzed for metals. At DTSC's direction, additional analyses were conducted for a wide suite of chemical classes, including: dioxins and furans, PCBs, VOCs, SVOCs, and phthalates. Based on analytical data, the collected material was profiled and disposed of as non-RCRA hazardous waste.

A summary of the results for analyses completed to date are presented below in Table 5.1. The sampling results to date show that samples collected from around the Site had detected concentrations of metals (N=51 samples) and dioxins and furans (N=7 samples) with fewer detections of PCBs (Aroclors) and Polybrominated diphenyl ethers (PBDEs). None of the VOCs or SVOCs were detected in any of the sampled material thus far

characterized (N=28 samples). Across the 30 samples analyzed for phthalates, there were two isolated detections for bis(2-ethylhexyl) phthalate of 57 and 41 mg/kg at sample locations Sample 30 and Sample 31, respectively. PAHs were analyzed in 28 samples and had a single reported detection of 35 mg/kg for fluoranthene in Sample 32.

Table 4.1. Summary of sample numbers, analytes tested and detects for on-wharf sediment samples with results to date.

Chemical Class	Number of Samples	Number of Analytes Measured per Chemical Class	Total Number of Measurements	Number of Detects Across all Analytes within Chemical Class	Frequency of Detection
Dioxins/Furans	7	17	119	119	100
Metals	51	18	707	556	79
PAHs	28	16	448	1	0.22
PBDE	7	10	70	16	23
PCBs	37	7	322	59	18
Phthalates	30	6	180	2	1.1
SVOCs	28	40	1120	0	0
VOCs	28	5	140	0	0

Additional results from analytical laboratories are still pending for 29 samples to supplement the existing dataset for metals, PBDEs, VOCs, SVOCs, dioxins and furans, and PCBs. These additional data will be reported to DTSC following receipt.

5.2 Characteristics of LFM

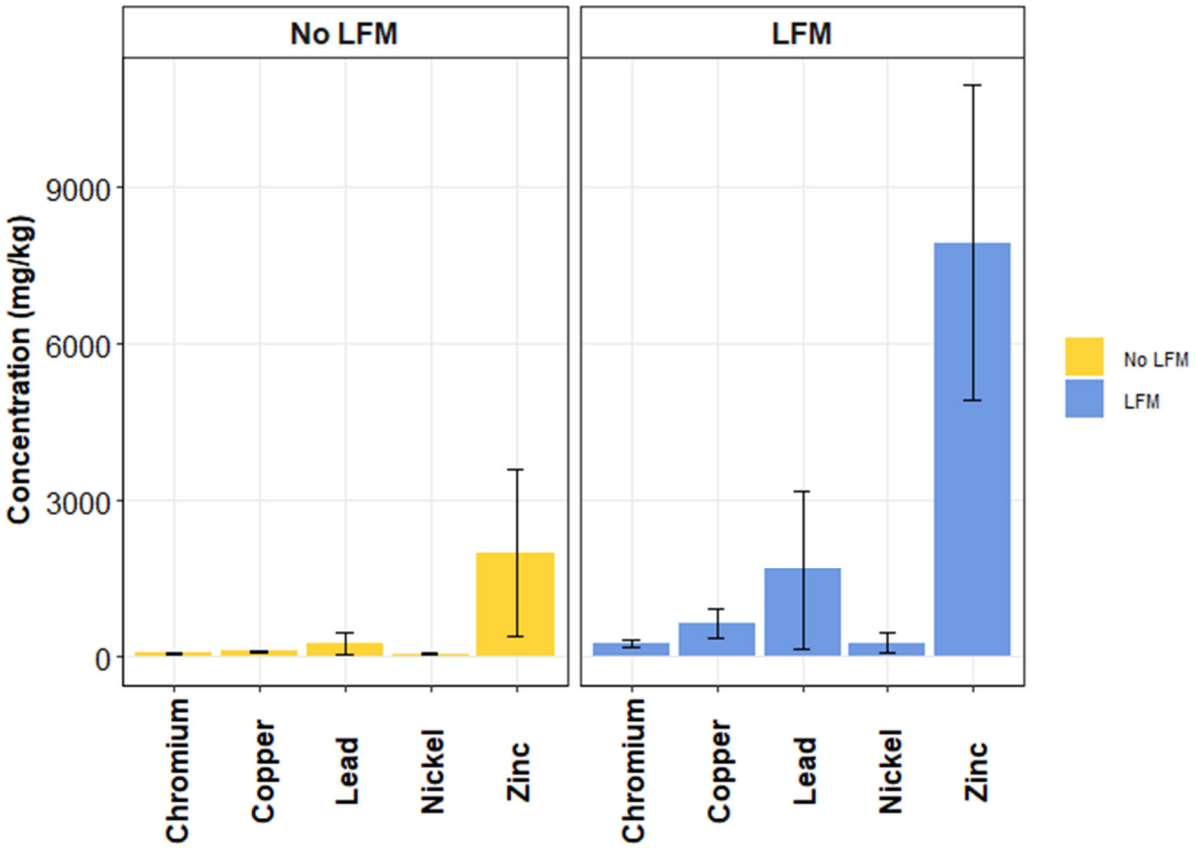
As directed by DTSC, efforts are underway to chemically characterize the collected material. As results for many of the dioxin and PBDE analyses are still pending, the current focus has been to characterize the metal composition of samples collected to date, and for which laboratory analysis are complete. As metals are ubiquitous in the environment and stem from multiple sources in industrial settings in and around the POLA, a focus has been to assess both the concentrations and the pattern of metals across the samples collected at YTI East and PST.

Table 4-2 below shows the observed metal concentrations for samples where LFM was present based on visual inspection. From this information, certain metals such as beryllium and thallium do not appear to be associated with LFM, with antimony and selenium also detected less frequently.

Table 4.2. Summary of sample numbers, detection frequency, and concentration ranges in samples collected where visual inspection indicated the presence of LFM.

Metal	Number of Samples	Number of detects	Detection Frequency	Minimum (mg/kg)	Maximum (mg/kg)
Antimony	6	3	50	0.51	28
Arsenic	6	6	100	7.4	17
Barium	6	6	100	540	1300
Beryllium	6	1	17	0.03	1.7
Cadmium	11	11	100	13	57
Chromium	6	6	100	160	380
Cobalt	6	6	100	17	46
Copper	6	6	100	390	1100
Hexavalent Chromium	6	6	100	12	18
Lead	11	11	100	820	6200
Mercury	5	5	100	1.4	7.3
Molybdenum	6	6	100	22	97
Nickel	6	6	100	140	650
Selenium	6	2	33	0.4	76
Silver	6	5	83	1.2	4
Thallium	6	0	0	0.38	3.8
Vanadium	6	6	100	31	90
Zinc	11	11	100	3000	14000

A comparison of metal concentrations in samples with observed LFM with metal concentrations in samples with no visible LFM is shown in the figure inset below for a subset of metals. The increase in metal concentration associated with samples where LFM was observed is indicated. However, the error bars which extend to plus and minus the standard deviation on the mean concentration show that those samples exhibited a wide range of concentrations.



Barplot showing the mean (bars) and standard deviation (error bars) for selected metal concentrations for samples composed primarily of LFM and without observable LFM.

Further evaluation of existing and pending analytical data will be conducted as part of this work plan to further chemically characterize LFM. This will be aided by the additional information provided by additional chemical analyses.

6.0 CONCEPTUAL SITE MODEL

As noted, this Investigation Work Plan and our Conceptual Site Model (CSM) is focused on LFM. The CSM is shown on the attached Figure 5 and will be updated as necessary following completion of the off-Site investigation proposed herein.

Under Corrective Action item 1c, the SOV called for “a conceptual site model.” Figure 5 is a depiction, based on a template recommended by the USEPA, of the conceptual site model for the area within a ½-mile radius of the SATI facility.

As is discussed in various guidance documents for the development of CSMs, the CSM is better viewed as an ongoing process rather than a specific product. It can be used to identify data gaps and as a basis for human and ecological risk evaluations and to support risk management/remediation efforts. As GSI prepares to undertake further investigation of the area within a ½-mile radius around the SATI facility (Figure 6), the CSM presented below has been prepared to help identify information needed from the investigation to support the evaluation of human and ecological health risks and to support risk management decisions. Elements of this version of the CSM will likely be modified in response to data collected as part of the further investigation of the area, and other elements may be confirmed by information gathered from the investigation. As part of the investigation of this area, GSI will observe the surface conditions and the presence of LFM. Most of the investigation will be conducted on Terminal Island, in industrial areas. Additional areas will be investigated, north of Terminal Island, across East Basin. The investigation areas north of the basin are predominantly industrial but also include part of a recreational marina. Beneath the northern edge of the PST facility wharf and shoreline across East Basin will also be inspected for the presence of LFM.

The potentially exposed populations shown in Figure 5 are based on current knowledge of land uses and activities in the investigation area as well as research and observations made during preliminary investigation and sampling efforts by GSI staff. The CSM shown in Figure 5 identifies hypothetically complete specific routes of exposure for the potentially exposed populations. Information to support the identification of complete routes of exposure will be collected as part of the proposed investigation. The current knowledge and hypotheses supporting key components of the CSM are presented below, along with the identification of data needed to complete or verify key aspects of the CSM.

6.1 Potential Releases and Point Sources

LFM may be present in the shredder, the ferrous treatment structure, and the MRP. These structures are maintained to minimize the potential for release of LFM. Minor point/nonpoint sources of LFM are trucks, and open stockpiles. SA Recycling has made improvements that include wet operations, covering operations, and construction of perimeter walls to reduce the potential for release of LFM. GSI is assessing data collected to determine potential constituents of concern in LFM.

6.2 Potential Constituents of Concern

This section describes the steps to be taken to identify the subset of chemicals associated with LFM that may potentially contribute to human health or ecological concerns (i.e., COPCs). As such, a procedure is proposed wherein the maximum measured concentrations of each LFM-related constituent are compared to regulatory screening criteria for ecological or human receptors as appropriate. Identification of a COPC via this screening level assessment is not an indication of risk or actual harm, rather, this step creates the subset of chemicals that will be further evaluated to assess whether removal activities are warranted.

All analytes in on-wharf/upland and marine sediment samples for which the maximum detected concentration exceeds its scenario- and receptor-specific screening level will be retained as a COPC. Substances for which the maximum concentration detected do not

exceed the screening criteria are not carried further in the site assessment process. Because the human health and ecological risk assessments evaluate different receptor scenarios and also apply different screening levels depending on the receptor and exposure medium, the final COPC lists for the ecological and human health screening may not be identical. A more detailed description of the key steps in the COPC selection process is provided below.

For sediment in the on-wharf/upland area, detected concentrations of COPCs will be compared to human health screening levels developed by DTSC for industrial settings. For marine sediments collected as part of the proposed sampling, ecologically based screening levels will be applied as the sediment area is not intensely used for human activities. Analytes will be retained for further evaluation if the maximum concentration is a detect, exceeds the media- and scenario-specific screening level, and the frequency of detection is greater than 5%.

As part of the ongoing clean-up and site evaluation, on-wharf sediment samples have been collected and analyzed for multiple classes of contaminants. A summary of the results from the perspective of which compound classes were detected in sampled sediments is provided in Table 4-1. From this, it is evident that compound classes such as SVOCs, VOCs, and phthalates are not associated with LFM and are therefore not considered COPCs for this investigation. To date, results are incomplete for other compound classes, so further evaluation of PCBs, dioxins and furans, and PBDEs will be conducted, and a screening will be performed once the on-wharf/upland sediment and marine sediment data collections are complete.

6.3 Environmental Migration Pathways

LFM can potentially be transported by the wind or surface water flow. Because LFM fibers are relatively large and because they tend to clump together and to form a felt-like mass in the environment from weathering, as depicted in photographs included in the Interim Cleanup Memorandum (Appendix B), it is not expected that LFM will be present in the breathing zone in the ambient air.

6.4 Exposure Routes

Human exposure to LFM in the investigation area could result from direct contact with the material, which theoretically could result in incidental ingestion or dermal absorption. Neither ingestion or dermal absorption are expected to be a significant exposure route because of the relatively large size of LFM and because the primary constituents of concern in the LFM have low dermal absorption. For reasons discussed above, in addition to the relatively large size of the fibers (i.e., non-respirable), inhalation of fibers is also not a significant route of exposure. Nonetheless, detected chemical concentrations will be compared to DTSC screening levels that assume exposure by ingestion, inhalation, and dermal absorption. A more detailed evaluation of chemical-specific and site-specific exposure assumptions will be performed for chemicals with detected concentrations above the screening levels for industrial settings. Human exposure to LFM in overland flow surface water or water in the East Basin is not a reasonably expected complete exposure route. Air sampling is planned, as described in GSI's Site-specific health and

safety plan (HASP) attached as Appendix C, to support a determination of whether inhalation of fibers is a complete exposure pathway.

In the East Basin, exposure to aquatic life in the water column is not expected because atmospherically deposited LFM would be expected to float on the water surface, based on the nature the material and the hydrodynamics of the waterway. Therefore, if LFM were deposited on water surface, it would be expected to be carried away by tidal flow and not provide a measurable change in surface water concentrations. Exposure to any material potentially present in marine sediments will be evaluated (Appendix D).

The planned investigation will include an inspection of rip rap and storm drain outfalls.

6.5 Potential Receptors

Potential receptors included in the CSM include potential human receptors and aquatic wildlife in the East Basin.

6.5.1 Potential Human Receptors

People potentially exposed to LFM within a ½-mile radius surrounding the SA Recycling Facility include people working or visiting the industrial areas on the north and south sides of the East Basin as well as people working in or visiting the small craft harbor on the north side of the East Basin. We note that the “visitors” and “residents” identified in the Conceptual Site Model diagram includes both adults and children. The small craft harbor does not allow residential occupancy. The people with the greatest likelihood of exposure would be those working in the vicinity of the SA Recycling facility where LFM accumulations have been observed (e.g., PST facility). People visiting or passing through the area could also be exposed, although initial surveillance of the are showed that LFM accumulations in accessible locations in the investigation area are very limited. There is no residential land use or other sensitive land uses (e.g., schools, daycare, medical facilities, etc.) in the industrial areas on the north or south side of the East Basin. Nonetheless, we have included a hypothetical residential exposure scenario in the evaluation of the potential future presence of residents or other sensitive land uses. In the small craft harbor are people who work at the marina or who visit to use their boats. (We understand from marina managers that up to 5 percent of the watercraft serve as illegal residences.)

As indicated in Figure 5 (CSM), people working in the vicinity of SATI may be exposed to LFM by direct contact. While inhalation of fibers by this population is theoretically complete, the volume of LFM in the area is very small and significant release of fibers from matted materials is not expected. Accordingly, the level of exposure to LFM by inhalation would be too small to warrant quantification. While direct contact with LFM and inhalation of LFM for people visiting the area are also potentially complete exposure routes, the degree of exposure to this group would be much smaller than the potential degree of exposure to full-time workers in the areas. These exposure routes would most likely be qualitatively addressed. Exposure to visitors would be quantified if a screening evaluation of full-time workers suggests full-time workers could be exposed to a significant level of health risk. As described in the HASP, particulate sampling during the investigation is planned to support an evaluation of the likelihood that LFM inhalation is a complete pathway.

As previously discussed, a small craft marina is on the north side of East Basin across from SATI. Potential receptors at the marina include people who work there, people who use their boats for commercial or recreational purposes, people who visit the marina for other reasons, as well as a small group of people who may illegally live on their boats. The site investigation will include an examination of the area around the marina beyond the preliminary evaluation recently completed to determine if LFM deposits are present in the marina area and, if so, where there are any potentially complete exposure routes. As part of the investigation, we will confirm our preliminary identification of people who work and visit the marina.

6.5.2 Ecological Receptors

Because the area has been developed for heavy industrial use and is almost entirely covered with hard surfaces and buildings, no terrestrial biota is expected to be exposed to LFM. Aquatic species may be exposed to LFM, if present, in the rip rap or marine sediments of the East Basin. Ecological receptors of concern would primarily entail the benthic community, and as such the concentrations and bioavailability of the COPCs in the sediments will be assessed, as described in the attached marine sediment sampling plan (see Appendix D). Given the surface water mixing and residence times, little exposure is expected for pelagic (fish) species. Avian receptors are also expected to have minimal exposure but will be evaluated for incidental ingestion and dietary uptake from aquatic exposure routes using wildlife screening values.

6.6 Data Gaps

To support the current iteration of the CSM, GSI will look for accumulations of LFM in areas not previously inspected. We will look for features that might affect wind dispersal from the identified accumulations (e.g., located in closed/covered spaces protected from further wind dispersal, covering with vegetation or other debris). We will also look at water drainage patterns and evidence of locations where LFM may have been carried into the East Basin, and we will look for evidence of accumulation in rip rap. At the locations where LFM has accumulated, we will look at land use and local activities that might create a potential for direct contact with LFM. As part of the reconnaissance of the area, GSI will also look for potential groups of people in addition to those identified above who may be present in the investigation area.

As part of the off-site LFM investigation, GSI will look at land use in the investigation area to confirm that the CSM includes all potentially exposed populations, and we will search for and document the location of any LFM accumulations found in the study area.

In addition, further sampling and laboratory analysis will be performed, including of on-wharf or upland sediment adjacent to LFM deposits, and marine sediments in the Cerritos Channel, as described below.

7.0 PROPOSED SCOPE OF WORK

The investigation will evaluate the presence of LFM within a ½-mile radius of the SATI facility. The proposed investigation activities include additional on-wharf or upland sediment sampling adjacent to LFM deposits, and marine sediment sampling as directed by DTSC.

Investigation activities will include off-site reconnaissance and visual inspection, on-wharf or upland sediment sampling adjacent to where LFM is observed, and marine sediment sampling and laboratory analysis to identify the extent of LFM and LFM-containing materials for removal planning. All work will be conducted in accordance with GSI's Site-specific HASP, attached as Appendix C. Sampling of on-wharf or upland sediment in proximity to observed LFM will be performed as described herein. Marine sediment sampling will be performed as described in the attached marine sediment sampling plan prepared by Winward Environmental, LLC (Winward) and included as Appendix D.

7.1 On-Wharf and Upland Off-Site Reconnaissance

GSI will perform reconnaissance within a ½-mile radius of the SATI property (Figure 6) to observe the surface conditions and investigate for the presence of LFM. Most of the investigation will be conducted on Terminal Island, in industrial areas. Additional areas will be investigated, north of Terminal Island, across East Basin. The investigation areas north of the basin are predominantly industrial, and also include part of a recreational marina. A skiff or other watercraft will be used to investigate the presence of LFM along the rip rap and shoreline within the Investigation Area, as required.

Any observed LFM will be noted on field logs, mapped, and documented in a photographic log. In addition, planning will be initiated for removal in accordance with the Cleanup Work Plan.

7.2 On-Wharf and Upland Sampling Strategy and Rationale

The locations of observed LFM deposits and surrounding sediment, if present, will be recorded using GPS and photo-documented for removal planning under the Cleanup Plan. Samples of sediments from on-wharf and upland areas with no observed LFM that are adjacent to where LFM is observed will be collected to adequately characterize conditions within the investigation area. Marine sediments will be sampled in accordance with the marine sediment sampling plan attached (Appendix D).

These data will be used to delineate the extent of potential off-site LFM impacts and define the areas where cleanup may be required.

7.3 On-Wharf and Upland Sampling and Analysis Plan

On-wharf and upland sediments will be visually evaluated for the presence of LFM. On-wharf and upland sediment accumulations with visually confirmed LFM will be recorded, and removal planning will be initiated.

To evaluate the need for removal, on-wharf and upland sediment accumulations without obvious indication of LFM that are adjacent to where LFM is observed will be documented, sampled, and analyzed for one or more of the following:

- Target metals;
- PCBs (as Aroclors or congeners);
- Particle size;
- Dioxins and dibenzofurans; and
- PBDE.

Each sample will be collected using clean/new nitrile gloves and disposable plastic scoops or drive sampler and placed directly into laboratory-provided 4- or 8-ounce glass jars. Samples will be labeled with unique identifying information and placed in resealable plastic bags and into an ice-filled chest for transportation to the laboratory under chain-of-custody protocols.

Marine sediment samples from the Cerritos Channel will be collected from 15 locations near the SATI recycling facility as shown in the marine sediment sampling plan (Appendix D). Marine sediment samples will be visually evaluated for the presence of LFM, and submitted for laboratory analysis of:

- Target metals (total and SEM);
- PCB congeners;
- Acid volatile sulfides (AVS);
- Total organic carbon (TOC);
- Percent solids; and
- Grain size.

Porewater from marine sediment samples will also be submitted for laboratory analysis of:

- Target metals;
- Sulfide, sulfate;
- TOC and dissolved organic carbon (DOC);
- Chloride; and
- Alkalinity.

Further description of the marine sediment sampling and analysis plan is presented in Appendix D.

8.0 EQUIPMENT DECONTAMINATION

Tools and equipment that will be used to sample and remove LFM will be washed with potable water and detergent and rinsed with potable water before and between each use. Rinse water will be contained in one or more drums, as necessary for subsequent waste profiling and disposal.

9.0 WASTE CHARACTERIZATION MANAGEMENT AND DISPOSAL

Solid and liquid accumulated as part of the investigation and removal action will be containerized in 55-gallon drums and bins, labeled pending analysis, and stored on SATI property pending waste profiling and off-Site disposal. The wastes will be sampled and characterized for off-site disposal in accordance with California Code of Regulations Title 22, Section 66262.11 (Hazardous Waste Determination).

10.0 DATA EVALUATION AND REPORTING

Data collected will be used to identify additional data needs and guide the on-wharf and upland areas LFM removal activities. The Clean-Up Plan submitted concurrently with this Investigation Work Plan will be updated, as warranted. Marine sediment results will be provided in a data evaluation report that will assess the potential impact of LFM in the near-site marine sediments, along with recommendations for additional investigation, as warranted.

10.1 On-Wharf and Upland Sediment Data Evaluation

Data collected from on-wharf and upland sediments will be used to assess the potential for impact from LFM, and potentially to identify additional data needs necessary to identify LFM-related COCs in sediments, if present. Chemical characterization of LFM will integrate information from multiple chemical classes. While elevated metal concentrations are a potential indicator, additional information is needed as metals are ubiquitous in the environment and multiple factors contribute to variations in their concentrations. As warranted, comparisons will also be made to evaluate the difference between background and general site setting to observed metal concentrations in the on-wharf and upland sediment samples.

10.2 Marine Sediment Data Evaluation

The marine sediment sampling plan is provided in Appendix D. The plan was designed to examine the near-shore marine sediment along the wharf that is most likely to show impact due to LFM. Marine sediment data will be evaluated for a number of key goals:

- Evaluate marine sediments for visible indications of LFM;
- Screen total metals and PCB concentrations against marine sediment benchmarks for potential benthic impacts;
- Evaluate metals bioavailability; and
- For any constituents determined to be COCs, evaluate if these may be derived from LFM.

As part of this evaluation, comparisons of the near-site marine sediment results to marine sediment sampling results from across POLA and POLB will also be conducted to evaluate the difference between background and general site setting considerations.

To support the above analyses, historical marine sediment data were compiled from the following sources:

- A sediment characterization report for Berths 212-224 for the YTI Container Terminal (Amec E&I, 2013);
- A sampling and analysis Report for Berths 226-232 for the Everport Container Terminal (Ramboll, 2015);
- A sampling and analysis report for Pier T, Pier S, the Back Channel and Turning Basic, and Pie Echo Sediment Characterization (Anchor, 2014); and
- Southern California Bight Regional Monitoring Program, Bight Program Data Portal California Regional (sediment chemistry downloaded on March 28, 2022).[2]

These data were compiled and standardized (analyte names and units were brought into parity for use in analysis with the SATI dataset). Due to differences across the datasets in which metals were analyzed and reported, this initial analysis focuses on cadmium, chromium, copper, lead, nickel, silver, selenium, and zinc. Cadmium, lead, and zinc were initially identified by DTSC in their soil and STLC/TCLP sampling.

10.3 Reporting

Upon completion of the investigation, and removal of any observed LFM, GSI will issue an Off-Site Investigation and Cleanup Report that will include the following, at a minimum:

- A description of the competed instigation activities and its findings;
- Maps showing inspection and sampling locations;
- Analytical data tables and laboratory reports;
- Photographs taken during the off-site investigation;
- Identification of additional data needs, if any; and
- Identified areas for cleanup/removal action.

[2] https://www.sccwrp.org/about/research-areas/regional-monitoring/southern-california-bight-regional-monitoring-program/bight-program-data-portal/

11.0 PROJECT MANAGEMENT AND SCHEDULE

The following section describes the project team structure and work plan implementation schedule.

11.1 Personnel And Qualifications

A team of GSI environmental scientists experienced in the identification of LFM will perform the off-Site LFM investigation. All field project personnel, including subcontractors, will have completed their OSHA 40-hour HAZWOPER training with 8-hour refresher courses. The Investigation Work Plan personnel responsible for assisting with the off-Site investigation are summarized below.

In addition, GSI and Winward scientists with specific subject matter expertise related to the investigation will also provide support on data evaluation and reporting. These include:

Name (Organization)	Title	Contact Number	Responsibilities/ Duties
Lindsay Maine (SAR)	SA Recycling Director of Environmental	714-632-2031	• Secure access to neighboring properties. • Monitor progress and preliminary findings and communicate with DTSC.
Timothy F. Wood, PG, CHG (GSI)	Principal Geologist	949-679-1070	• Manage Off-Site LFM Investigation. • Coordinate GSI personnel and SAR and subcontractors assisting with Off-Site Investigation implementation. • Ensure implementation of the Investigation Work Plan.
Timothy S. Simpson, PE, GE	Principal Engineer	949-679-1070	• Provide technical support for Off-Site Investigation and assist with data evaluation.
Robert Scofield, MPH D. Env.	Principal Toxicologist and Vice President	510-463-8485	• Conduct the human health screening for COPCs.
Kenia Whitehead, Ph.D., Certified Sr. Ecologist (GSI)	Senior Aquatic Scientist	925-322-9720	• Provide oversight for sediment sampling, data evaluation, and screening evaluations. • Conduct data analyses to chemically characterize LFM.
Gao Martell, PG (GSI)	Geologist	949-679-1070	• Oversight of field personnel and subcontractors. • Environmental data manager and laboratory coordinator.
Windward Environmental, LLC	Aquatic Scientists		• Marine sediment sampling planning and analysis (see Appendix D for specific personnel). • Provide technical support for data evaluation and reporting.

11.2 Schedule

The schedule below estimates the length of time needed to complete the off-Site investigation, following approval by DTSC of this Investigation Work Plan.

Task Description	Estimated Time to Completion
Marine sampling and analysis plan, permitting, and access to properties within ½-mile radius	8 weeks
LFM inspection and sampling on-wharf, upland, and marine	8 weeks
Perform laboratory analysis of samples	8 weeks
Reporting	12 weeks
Total Estimated Time	36 weeks

Note the schedule is subject to logistical considerations, property and waterway access, and weather conditions. Laboratory analysis times may vary based on laboratory workload and sample handling and processing times.

12.0 REFERENCES

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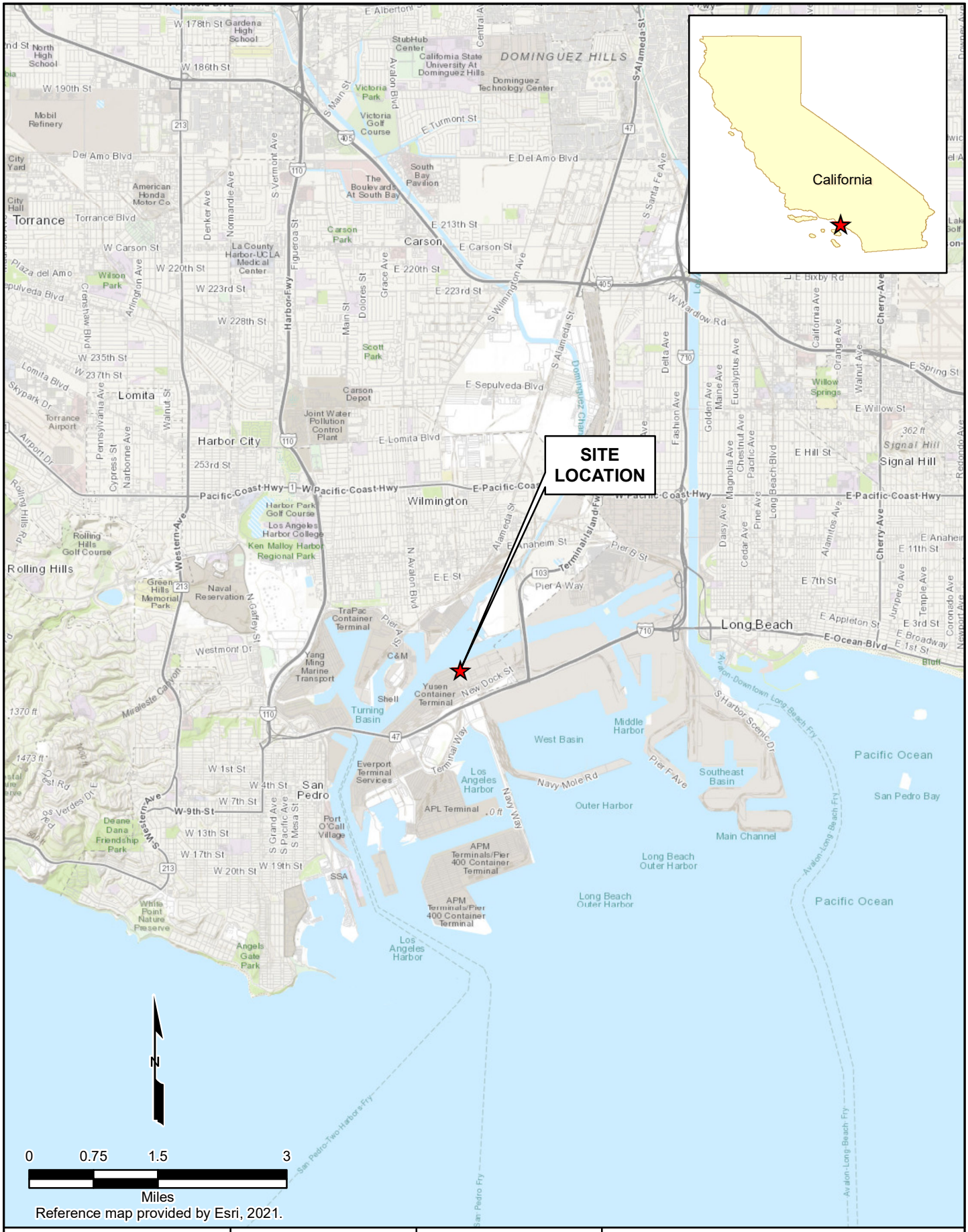
OFF-SITE LFM INVESTIGATION WORK PLAN (AMENDED)
SA Recycling LLC
901 New Dock Street, Terminal Island, California

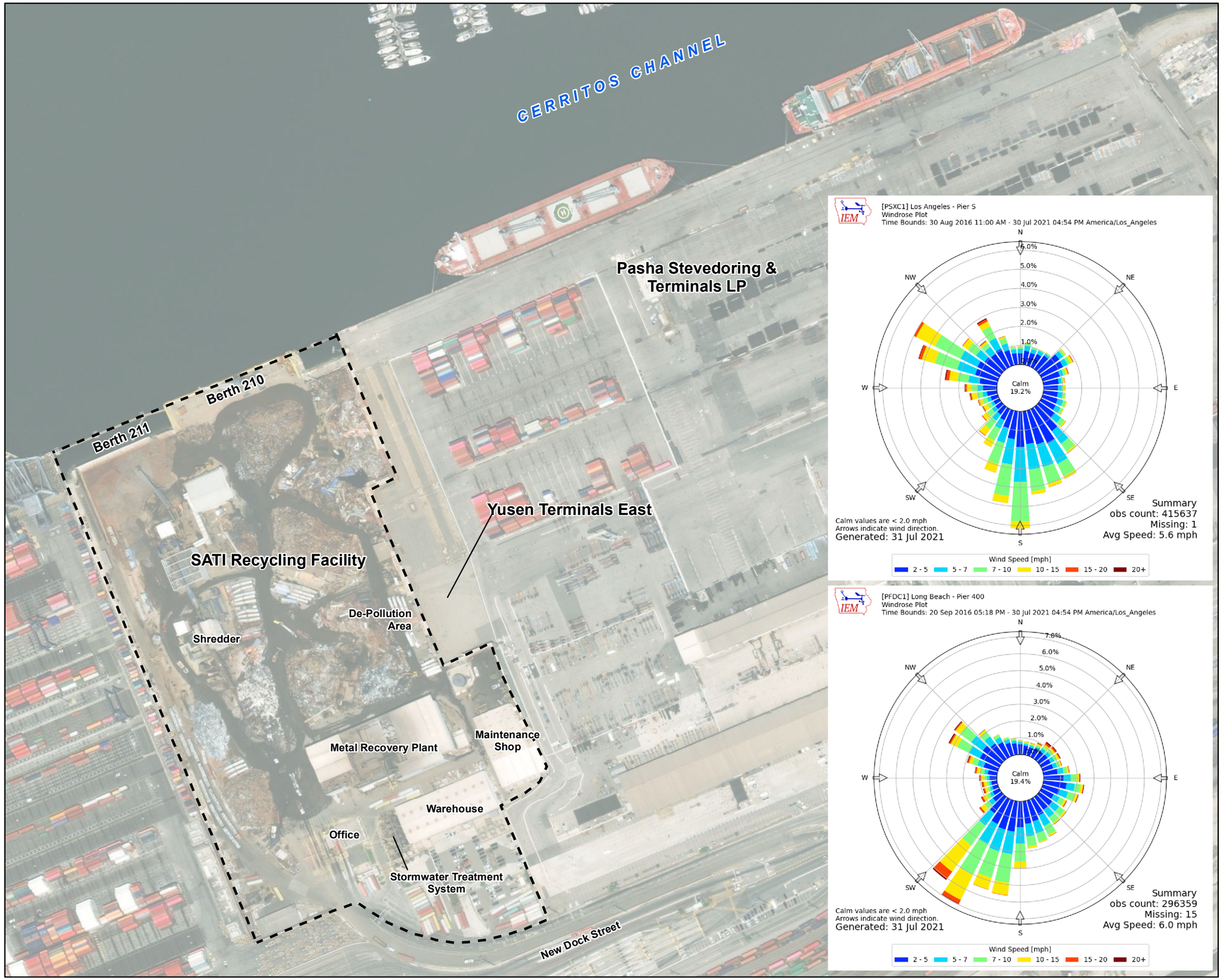
FIGURES

Figure 1. Site Location Map
Figure 2. Site Map
Figure 3. Sample Locations
Figure 4. Site Stormwater Management Map
Figure 5. Conceptual Site Model
Figure 6. Off-Site Investigation Area



Reference map provided by Esri, 2021.

GSI ENVIRONMENTAL	GSI Job No. 6013	Drawn by: AV	**SITE LOCATION MAP**
	Issued: 30-Mar-2022	Chk'd by: GM	SA Recycling LLC 901 New Dock Street, San Pedro, California
	Revised:	Aprv'd by: TW	
	Map ID: SATI_TopoMap	**FIGURE 1**	



N

LEGEND

Property Boundary

Notes

1) Aerial imagery provided by Esri ArcGIS Online, November 2020.
2) Windrose plot downloaded from: https://mesonet.agron.iastate.edu/sites/windrose.phtml?station=PFDC1&network=CA_DCP, on October 14, 2021.

Feet
0 100 200

Projected Coordinate System
Datum: NAD 83
State Plane California Zone V
Units: Feet

GSI ENVIRONMENTAL

SITE PLAN

SA Recycling LLC
901 New Dock Street, San Pedro, California

GSI Job No.	6013	Drawn By:	GM
Issued:	22-Apr-2022	Chk'd By:	TW
Map ID:	SATI_SiteMap	Appv'd By:	TW

FIGURE 2

N

LEGEND

- LFM Sample
- LFM Mix Sample
- No LFM; Sediment Sample
- Property Boundary

Note

Aerial imagery provided by Esri ArcGIS Online, July 2021.

Feet
0 100 200

Projected Coordinate System
Datum: NAD 83
State Plane California Zone V
Units: Feet

GSI ENVIRONMENTAL

SAMPLE LOCATIONS

SA Recycling LLC
901 New Dock Street, San Pedro, California

GSI Job No.	6013	Drawn By:	AV
Issued:	19-Apr-2022	Chk'd By:	GM
Map ID:	SATI_SampleLocs	Appv'd By:	TW

FIGURE 3

N

LEGEND

- Property Boundary
- Stormwater Flow Direction
- Drain with Pump Station to Stormwater Treatment System

Notes

1. Pump Station 6 does not convey stormwater to the site stormwater treatment system. Stormwater from Pump Station 6 is reused in the Metal Recovery Plant.
2. Aerial imagery provided by Esri ArcGIS Online, July 2021.

Feet
0 85 170

Projected Coordinate System
Datum: NAD 83
State Plane California Zone V
Units: Feet

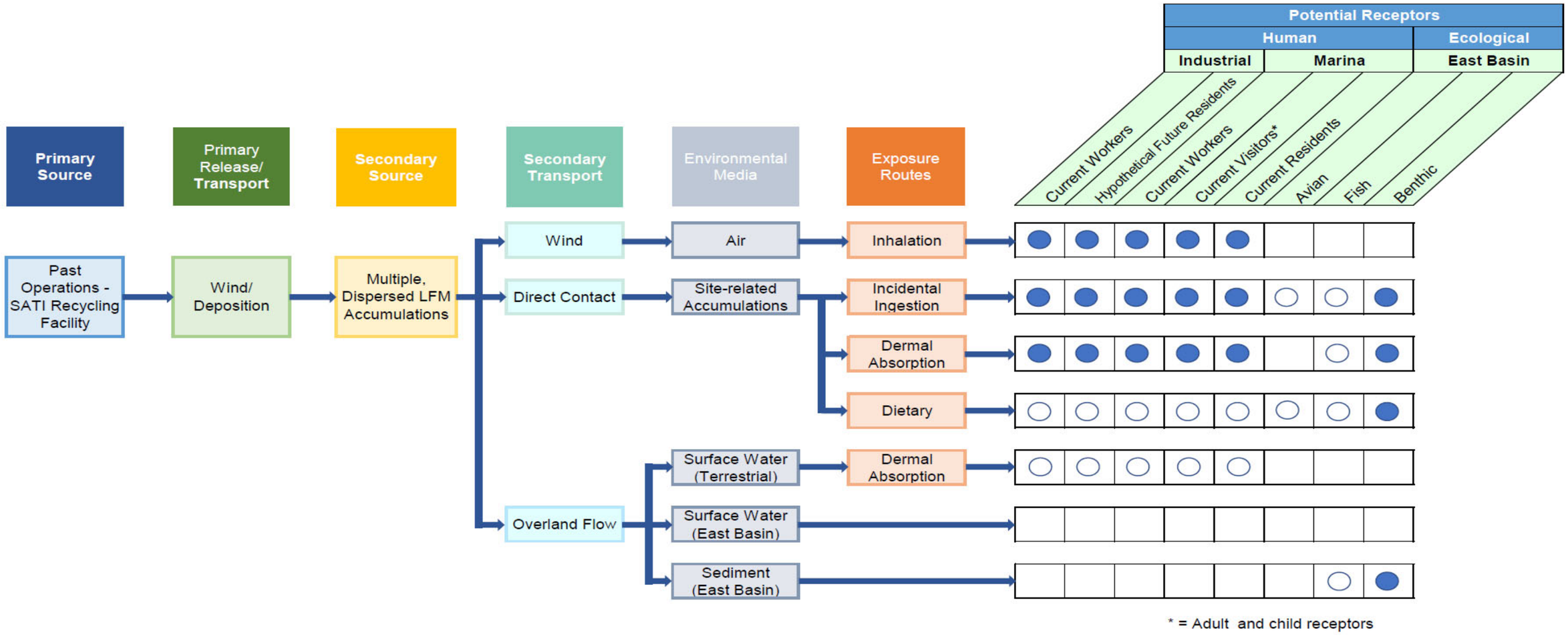
GSI ENVIRONMENTAL

SITE STORMWATER MANAGEMENT MAP

SA Recycling LLC
901 New Dock Street, San Pedro, California

GSI Job No.	6013	Drawn By:	AV
Issued:	19-Apr-2022	Chk'd By:	GM
Map ID:	SATI_SWMap	Appv'd By:	TW

FIGURE 4



EXPLANATION

- ● Potentially complete and significant pathway; will be evaluated quantitatively.
- ○ Potentially complete but insignificant pathway; will be evaluated qualitatively.
- ☐ Incomplete pathway; will not be evaluated (based on current information).

GSI ENVIRONMENTAL

FIGURE 5
CONCEPTUAL SITE MODEL
SA Recycling LLC
901 New Dock Street, San Pedro, California

GSI Project: 6013
Issued: Apr-22-2022
Drawn By: GM
Approved By: TW

N

LEGEND

0.5 Mile Radius around Site

Notes

Aerial imagery provided by Esri ArcGIS Online, November 2020.

Feet
0 300 600

Projected Coordinate System
Datum: NAD 83
State Plane California Zone V
Units: Feet

GSI ENVIRONMENTAL

OFF-SITE INVESTIGATION AREA

SA Recycling LLC
901 New Dock Street, San Pedro, California

GSI Job No.	6013	Drawn By:	AV
Issued:	19-Apr-2022	Chk'd By:	BGM
Map ID:	SATI_SampLocsMiRad	Appv'd By:	TFW

FIGURE 6

OFF-SITE LFM INVESTIGATION WORK PLAN (AMENDED)
SA Recycling LLC
901 New Dock Street, Terminal Island, California

APPENDICES

OFF-SITE LFM INVESTIGATION WORK PLAN (AMENDED)
SA Recycling LLC
901 New Dock Street, Terminal Island, California

APPENDIX A

Port of Los Angeles Dredging Figures

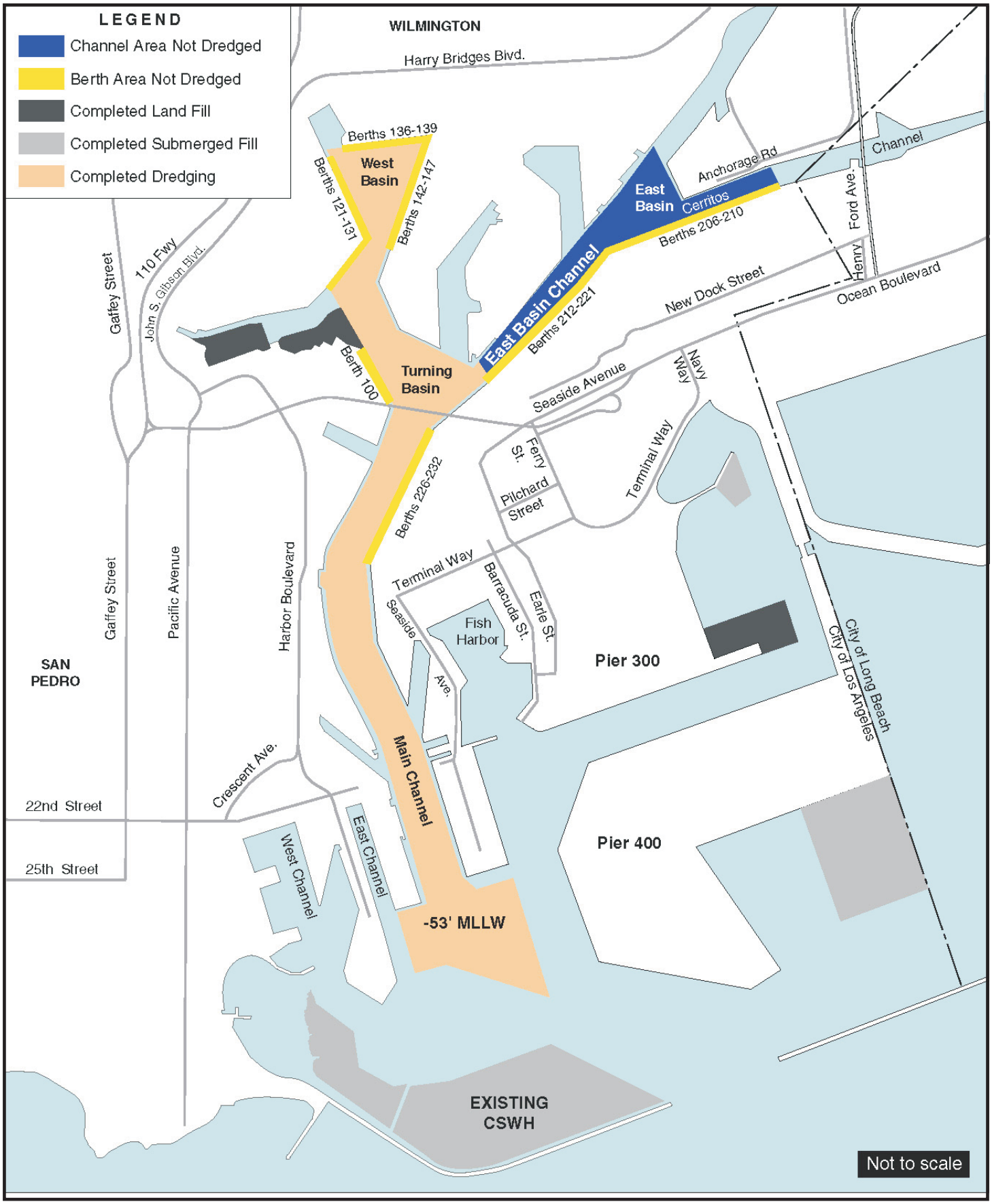


Figure 2-1
Alternative 1:
Remaining Dredging and Surcharge Removal

FINAL
SAMPLING AND ANALYSIS PLAN REPORT
BERTHS 195-200A AND 210-211 MAINTENANCE DREDGING
LOS ANGELES HARBOR

Submitted to:

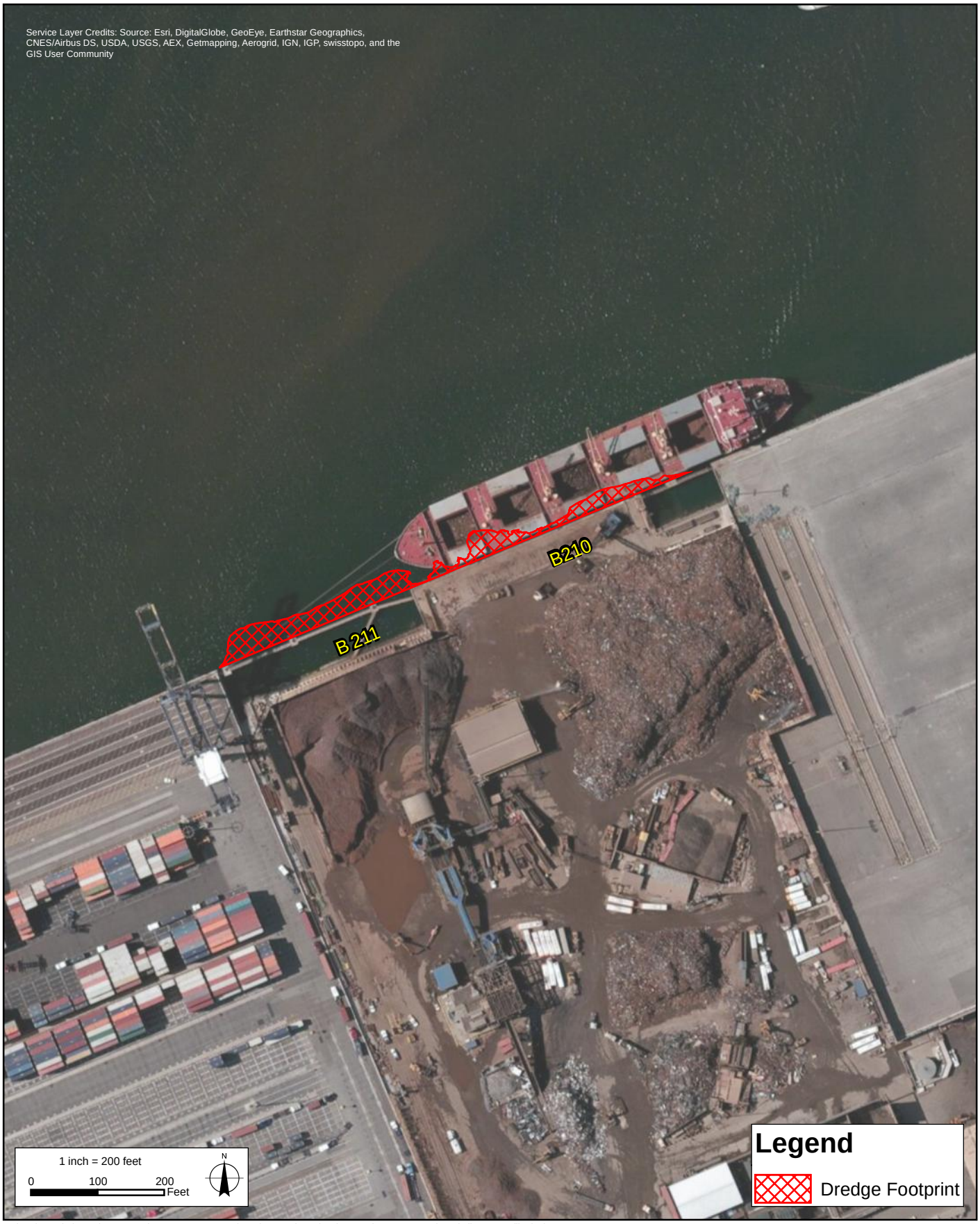
Port of Los Angeles
Environmental Management Division
425 South Palos Verdes Street
San Pedro, California 90731

Submitted by:

Amec Foster Wheeler Environment & Infrastructure, Inc.
9210 Sky Park Court, Suite 200
San Diego, California 92123

April 2016

Agreement Number: 13-3141
APP Numbers: 151104-521W and 151104-521W
Project Directive Numbers: 26 and 27
Amec Foster Wheeler Project Numbers: 1315102726 and 1315102727



Path: Q:\Aquatics\POLA\POLA_Berths195_200A_210_211\MXD\ReportFigures\ProjectLocation210_211.mxd, rochelle.petruccelli 3/14/2016

amec foster wheeler

Project Location
Berths 210 - 211
Maintenance Dredging
Port of Los Angeles

FIGURE

3-2

OFF-SITE LFM INVESTIGATION WORK PLAN (AMENDED)
SA Recycling LLC
901 New Dock Street, Terminal Island, California

APPENDIX B

Off-Site LFM Interim Cleanup and Sampling Results Technical Memorandum

GSI Job No. 6013

22 April 2022

Lindsay Maine
SA Recycling LLC
901 New Dock Street
Terminal Island, California 90731

Re: Off-Site LFM Interim Removal and Sampling Results Memorandum
901 New Dock Street
Terminal Island, California 90731

Dear Ms. Maine,

GSI Environmental Inc. (GSI) has prepared this technical memorandum to document removal of light fibrous material (LFM) performed for the SA Recycling LLC (SA Recycling) metal recycling facility located at 901 New Dock Street, on Terminal Island (SATI recycling facility; the Site) within the Port of Los Angeles (the Port, Figure 1). Removal actions were performed from October 2021 to April 2022 at the facilities located east of the SATI recycling facility: Yusen Terminals, LLC (YTI) East and Pasha Stevedoring & Terminals, LP ("Pasha"). During removal actions, samples of sediment on the terminal pavement were collected for analysis to characterize potential LFM content. Sample results are discussed herein.

SITE BACKGROUND

The SATI recycling facility operations include shredding automobiles, appliances, and other scrap metal materials. The Site consists of 27 acres, making up Berths 210 and 211 along the Cerritos Channel on the northern portion of Terminal Island (Figure 2). The facility is within an industrial area of the Port, bounded by a shipping container terminal to the west (YTI), a materials and cargo terminal to the east, (Pasha), and New Dock Street and a railroad right-of-way to the South. The YTI East facility (back part of berth 209) and Pasha facility (berths 206 to 209) are located to the east of the SATI recycling facility (Figure 2).

A detailed description of the SATI recycling facility and its history is provided in the Off-Site LFM Investigation Workplan (Amended), prepared by GSI and submitted to the California Department of Toxic Substances Control (DTSC) dated April 22, 2022.

DEFINITION OF LFM

In its DTSC 28 January 2002 comments, DTSC requested the definition of LFM to be included as:

> "LFM is material produced during the metal shredding process which can be uncontrollably dispersed offsite due to wind, rain, or other factors if the LFM not adequately managed. LFM resulting from metal shredding operations typically consists of residues such as glass, rubber, automobile fluids, dirt, and plastics from shredded car dashboards, car seats, other non-metallic car parts, household appliances, and other sources. Samples of LFM have been shown to meet the criteria for hazardous waste in California due to concentrations of metals at levels exceeding the toxicity criteria defined in California Code of Regulations, title 22, section 66261.24(a)(2)(A)."

Unless wetted or properly contained, LFM may be susceptible to dispersion. If dispersed, LFM can mix with sediment, debris, trash, and vegetation, becoming matted and immobile.

DTSC 2021 OFF-SITE SAMPLING

DTSC collected eight samples of suspected LFM deposits at the YTI and Pasha facilities on September 1, 2021 (seven samples at YTI; one sample at Pasha). DTSC's sampling results are summarized in Attachment A.

SUMMARY OF REMOVAL ACTION

GSI conducted removal actions and sampling from October 2021 through April 22, 2022. Activities consisted of an initial assessment with sampling in October 2021 followed by a targeted removal at Pasha that month. Removal actions and sampling at YTI East and Pasha began in December 2021 and proceeded through March 2022 at YTI East and April 2022 at Pasha. Material sampled included sediment with and without observable fibrous material. Sediment was sampled for various analyses (Table 1) (Figure 3). Activities and results are described below with analytical results summarized in Tables 2 through 9.

Cleanup and Laboratory Analysis Contractors

Innovative Construction Solutions of Costa Mesa, California (ICS) is the primary contractor implementing removal work. Environmental Contractors Transportation Inc. of San Bernardino, California (ECTI) provided waste removal services. Laboratory services were provided by Advanced Technology Laboratories (ATL) of Signal Hill, California, and Vista Analytical Laboratory (Vista) of El Dorado Hills, California.

Health and Safety Plan

All work was conducted in accordance with GSI's site-specific health and safety plan (HASP) attached as Attachment B.

PRELIMINARY OFF-SITE ASSESSMENT

On October 6, 2021, GSI and SA Recycling personnel performed a preliminary reconnaissance of the western and northern portions of the Pasha facility, encompassing the area of DTSC's eight sampling locations. At this time, GSI collected sediment samples including samples co-located with the DTSC September 2021 samples. In total, GSI collected ten samples from YTI East and four samples at Pasha on October 6, 2021. Samples were analyzed for total metals and leachate (Table 2). Samples are listed below, tabulated in Table 1, and results are discussed in the Results Section below. Attachment C is a photolog of all interim cleanup samples.

- PT01 through PT08;
- PT01A – Surface sediment approximately 5 feet north of the storm drain inlet at DTSC sampling location SATI-BF-01 and GSI sample PT01;
- PT05A – Sediment in asphalt erosional channel;
- PT08A – Surface sediment along wooden berm of wharf approximately 35 feet east of SATI property;
- PT08B – Surface sediment along wooden berm of wharf approximately 150 feet east of SATI property; and
- PT-08C – Surface sediment along wooden berm of wharf approximately 235 feet east of SATI property, approximately 15 feet east of samples SATI-BF-08/PT08 utility vault.

PASHA REMOVAL ACTIVITIES

Removal activities were completed on 23 October 2021 due to the potential for significant rainfall impacting recently disturbed areas from the DTSC and GSI sampling events. Interim removal and control measures were completed for localized areas. Under GSI's direction, ICS used portable vacuums with high efficiency particulate air (HEPA) filters, shovels, and brooms to clean all accumulated material from the storm drain in the southwest portion of the Pasha facility. Loose sediment in other areas disturbed by the recent sampling events were either removed or stabilized by covering with plastic sheeting and sandbags, which subsequently were removed. Specific removal actions for each location were carried out as described below.

- Removed storm grate and manually removed and vacuum accumulated material from grate and interior lip, sides, and bottom of vault; place straw waddle and orange cones around grate; drum and profile materials for disposal.
    - SAT1-BF-01
    - PT01
    - SAT1-BF-04
    - PT04
    - PT04A
- Vacuumed sediment; drummed and profiled for disposal.
    - PT01A
    - PT05A
- Covered disturbed sample area with plastic sheeting and secured edges.
    - SAT1-BF-02
    - PT02
    - SAT1-BF-03
    - PT03
    - SAT1-BF-06
    - PT-06
    - SAT1-BT-07
    - PT07
- Vacuumed sediment along utility vault edges with wood berm; placed straw waddles and orange cones around vault; drummed and profiled sediment for disposal.
    - SAT1-BF-08
    - PT-08
- Vacuumed sediment along wood berm; drummed and profiled sediment for disposal.
    - PT08A
    - PT08B
    - PT08C

YTI EAST REMOVAL ACTIVITIES

YTI East borders the SATI recycling facility to the east and is separated by a container wall. YTI East is active with trucks and forklifts moving empty shipping containers. Cleanup activities at YTI East were conducted intermittently from December 22, 2021, through March 22, 2022.

The YTI East terminal was observed to have accumulations of sediment and debris on the surface of the property as well as within vaults and other below grade features within the property. Widespread vegetative growth was observed at YTI East.

Actions taken consisted of debris removal and removal of observed sediment and vegetation on the surface of the terminal property. Additionally, removal activities included investigating drains, tracks, and other features of the YTI property for the presence of LFM and/or sediment and performing removal as appropriate. All sediment and debris removed were placed in 55-gallon drums and vegetation waste was placed in totes. See the Waste Disposal section for more information.

YTI East Tracks

Two parallel tracks associated with an out-of-service crane are located in the eastern portion of YTI East and run north to south. The tracks are installed within a concrete-lined trench set approximately 2 feet below grade; concrete walls on each side of the tracks extend vertically to approximately 2 feet above grade.

Matted deposits were observed along the southern end of both west and east tracks. These deposits appeared fibrous with dust and plant seeds from nearby bushes. Deposits of sediment, debris, and mud were removed using shovels while smaller amounts of sediment within pavement cracks or along property features were removed with scrapers, brooms, and vacuums with HEPA filters. Sediment within crevices in the tracks not accessible by scrapers and brooms were agitated with a wire brush and vacuumed.

Inset light boxes were built in the concrete walls along the west and east tracks. Sediment deposits were found in these inserts, which appeared to be mixed with LFM and/or plant material. The middle walkway between the two tracks is paved with asphalt and in some locations contained matted sediment deposits and plant growth. Deposits appeared to be a blend of fibrous material and soil. The matted deposits were removed with shovels and remaining trace material were scraped with a wire brush and vacuumed. Plant growth above the pavement was removed using pickaxes, shovels, and scrapers. Removed plant material was stored in plastic totes. A final sweep and vacuum of the walkway was conducted to remove any remaining trace sediment.

A submerged area was found on along the southern end of the west track, measuring approximately 6-feet by 9-feet. The submerged area had cattail growth. Cattails and roots were removed using a shovel and placed into the vegetation totes. After cattail removal, water was pumped out and containerized in 55-gallon drums. Metal grates and a metal pipe were found in the submerged area entangled with plant material. The metal grates and metal pipe were cleaned with scrapers and wire brushes and vacuumed.

The tracks slope north to south with a water conveyance system at the south end. The water conveyance system consists of a trench approximately 2-feet below the rail trench bottom and covered with metal plates at grade. The water conveyance system contained approximately 2 to 3 inches of mud and moist sediment that appeared to contain fibrous material, possibly LFM and vegetation. The mud and sediment were removed with a shovel and remaining trace sediment was scraped and vacuumed.

YTI East Western Perimeter

The boundary wall between the SATI recycling facility and YTI East is a container wall that is located on SATI property. The SATI recycling facility has a lower grade along this boundary than the YTI East terminal. Sediment was removed by scraping and vacuuming. The removed sediment was drummed for disposal. Metal debris was loaded into a roll off bin and taken to the SA recycling facility for recycling.

South K-rails and Southern YTI East Property Boundary

The south K-rails and southern property boundary run west-east on the south portion of YTI East. The YTI East south boundary divides it from the southern portion of the SA recycling facility; this boundary has a sheet metal fence on the SA Recycling side and a chain-linked fence on the YTI side, leaving a gap of a couple feet between them. Matted deposits containing sediment, dirt, and plant material were found between these fences. Plant growth was also found behind the chain-linked fence. With approval from YTI, the chain-linked fence was removed, and plants were removed with pickaxes and shovels. Plant roots were removed using a scraper and chisel. Matted sediment was removed using a shovel and trace amounts removed using a scraper and vacuum. The south K-rails were moved and the surface underneath them was vacuumed.

Northeast K-rails

The northeast K-rails bordered the east side of the east track at the boundary between YTI East and the Pasha bulk materials loading terminal. Plants were found wedged in and growing between the east track and the northeast K-rails. Unlike the south K-rails, the northeast K-rail had embedded fencing. Fencing embedded into the northeast K-rails was removed, followed by removal of plants using pickaxe and shovel and their roots with a scraper and chisel. Sediment was not observed to contain fibrous material.

Inset concrete boxes with metal inserts were also found along the east-facing concrete wall of the east track. The white inset boxes were cleaned in the same manner as those found along the walkway.

Welded-shut vaults are present underneath the northeast K-rails. The area around the welded vaults were vacuumed and their edges cleaned with a wire brush.

General YTI Surface

All areas covered by asphalt were cleaned of sediment. Cracks in the asphalt were cleaned by scraping with a screwdriver or chisel to dislodge sediment and then vacuumed. Chiseling and vacuuming were repeated until no more sediment and dust were dislodged. Remnants of what appeared to be cut fence posts were found scattered throughout the asphalted areas south of the east and west tracks. Remnants of cut fence posts still contained hollow steel casing embedded into the slab. Sediment deposits were found in the hollow steel casing and were removed by chiseling and vacuuming until no more sediment and dust were dislodged.

Electrical Vault by Container Wall

An electrical vault was identified near the middle of the Container Wall. The electrical vault was covered by a steel plate. The steel plate was temporarily moved to access the electrical vault. The vault contained a thin deposit of sediment. The thin deposit of sediment was removed with a scraper and the edges were cleaned with a metal brush. The electrical vault was subsequently closed, and the steel plate moved back on top.

YTI East Sampling

Sampling of sediment was conducted throughout cleaning activities. Samples were collected at various locations of sediment deposition, regardless of the observation of fibrous material that might indicate the presence of LFM (Table 1).

GSI collected ten samples from YTI in October 2021 including samples at the same locations as the DTSC samples from September 1, 2021. During cleanup activities, 13 additional sediment samples were collected from December 22, 2021, to March 8, 2022 (Table 1). Samples were collected into laboratory-provided 6- or 8-ounce glass jars.

Samples are shown on Figure 3 and sample locations described in Table 1. December 2021 to March 2022 samples were analyzed for some or all of the following analyses:

- Percent moisture;
- Metals including hexavalent chromium and mercury via United States Environmental Protection Agency (EPA) Method 6010B, 7196A/3060A, and 7471A;
- Diesel and oil range organics (DRO and ORO) via EPA Method 8015B;
- Polychlorinated biphenyls (PCBs) Aroclors via EPA Method 8082 or congeners via EPA Method 1668;
- Phthalates and polycyclic aromatic hydrocarbons (PAHs) via EPA Method 8070C
- Particle size;
- Dioxins and dibenzofurans via EPA Method 8290; and
- Polybrominated diphenyl ethers (PBDE) via gas chromatography-mass spectrometry.

CONTAINER WALL REMOVAL ACTIVITIES

The northern portion of the SATI recycling facility eastern boundary with YTI East consists of a wall made up of shipping containers stacked 3 to 4 containers tall. This container wall was cleaned. An articulating boom lift was used to hoist a harnessed ICS worker to facilitate cleaning the container wall. The sides and top of the container wall were cleaned with a vacuum.

PASHA FACILITY REMOVAL ACTIVITIES

The Pasha terminal borders the SATI recycling facility to the northeast and borders YTI East to the north and east. Pasha is active with trucks and forklifts moving bulk materials, such as metal piping. The north side of Pasha consists of a wharf (berths 206 to 209) where ships dock to load and unload their materials. After the targeted Pasha cleanup during October 2021, cleanup resumed on December 22, 2021, and continued over various mobilizations through April 19, 2022.

Vault Cleaning

Sub grade utility vaults are present along the northern edge of the Pasha wharf. The size and type of vaults vary. Larger vaults, with two-hinged doors, contain electrical cords and pipes. Some vaults have an approximately 3- to 4-inch diameter opening at the bottom directed vertically towards the water, some of which were blocked with apparent cement or other plugs. Smaller vaults, with one-hinged door, contain electrical receptacle and cords but do not have an opening to the water.

Cleaning of vaults occurred from December 22 to 23, 2021 and from March 14 through March 16, 2022. A total of 30 vaults were cleaned. The general removal procedure consisted of pre-inspection of vaults to plan for removal activities. Plastic sheeting and tape were used to block outlets before removal activities commenced.

Vaults with water in the bottom were pumped out and the removed water was drummed separately from solid waste. Bulk removal of debris, trash, and fibrous and sediment deposits was conducted with shovels, other hand tools, and vacuums. All removed materials were placed in drums.

Pasha Wharf Sweeping and Rail Cleaning

An at-grade single railroad rail with side channels is present within approximately 5 feet from the wharf edge. In addition, a raised wood berm is present at the northern edge of the wharf. Sediment deposition along the wood berm, from along the sides of the rail, and from the pavement surface between them was removed with a shovel or scraper and subsequently vacuumed.

A covered, inactive electrical vault also running the length of the wharf is located between the rail and water edge. Minor sediment deposition was observed in the edges and grooves of the electrical vault covers. These sediments were scraped with a metal hook and vacuumed. All removed material was containerized in 55-gallon drums and pending off-site disposal.

Pasha Sampling

As described above, GSI collected four initial sediment samples from Pasha in October 2021. In addition to these samples, samples were collected from each vault (24 samples collected). Additional samples were collected along the rail; however, these results are pending as of the writing of this memorandum and are not included in the tables or discussions below; these data will be included in the Off-Site Investigation Report, prepared following implementation of the Off-Site LFM Investigation Work Plan (Amended, dated 22 April 2022). Samples were placed into laboratory-provided 8-ounce glass jars. Sample locations are shown on Figure 3 and sample locations are described in Table 1. December 2021 to March 2022 samples were analyzed for some or all of the following analyses:

- Percent moisture;
- Metals including hexavalent chromium and mercury via United States Environmental Protection Agency (EPA) Method 6010B, 7196A/3060A, and 7471A;
- Diesel and oil range organics (DRO and ORO) via EPA Method 8015B;
- Polychlorinated biphenyls (PCBs) Aroclors via EPA Method 8082 or congeners via EPA Method 1668;
- Phthalates and polycyclic aromatic hydrocarbons (PAHs) via EPA Method 8070C
- Particle size;
- Dioxins and dibenzofurans via EPA Method 8290; and
- Polybrominated diphenyl ethers (PBDE) via gas chromatography-mass spectrometry.

SAMPLING SUMMARY

A total of 51 interim cleanup samples of sediment were collected from October 2021 to March 16, 2022 (Table 1). Of these 51 samples, 23 were collected from the YTI East terminal and 28 were collected from the Pasha terminal. Sediment samples were delivered under chain-of-custody protocol to laboratories ATL and Vista, depending on the analyses requested. An additional 25 soil samples were collected during April 2022; however, these analytical results are pending as of the writing of this memo and will be included in the Off-Site Investigation Report. Results are discussed in the Results Section below. Attachment C contains a photolog of all collected samples.

WASTE DISPOSAL

During cleanup, solid and liquid wastes were segregated and drummed separately. Materials removed from Pasha and YTI East were also drummed separately. Filled drums stored were marked with the date of generation, a drum number, a solid or liquid designation, and relevant contact information.

ECTI provided transportation to off-site disposal facilities. Waste pickup was observed by GSI personnel. Manifests were signed by ICS prior to transport of drums.

Based on analytical results from samples and drum contents, the drummed sediment material was profiled for disposal as hazardous waste. A total of 264 drums of soil and water were disposed offsite between October 2021 through April 19, 2022. Solids drums were disposed of under a non-RCRA California hazardous waste profile for lead and zinc, and water drums under a non-hazardous waste profile. The 52 totes of plants were disposed of under a non-RCRA California hazardous waste profile for metals. Waste profile sample results are provided in Tables 10 through 11 and a drum log is provided in Table 12. Waste manifests are attached as Attachment D.

SAMPLE RESULTS

Sample results from the October 2021 samples, and the YTI East cleanup and the Pasha vault cleanup through March 16, 2022, are summarized in Tables 2 through 8. Sample results from the Pasha rail removal actions performed in April 2022 are not yet available. Laboratory reports for samples collected through March 16, 2022, are attached as Attachment E.

Metals

Metals were analyzed and detected in all 51 soil samples collected through March 16, 2022 (through Sample 36) (Table 2). Metals with the highest concentrations were zinc (maximum concentration of 20,000 milligrams per kilogram (mg/kg)), lead (maximum concentration of 6,200 mg/kg), barium (maximum concentration of 1,300 mg/kg), and copper (maximum concentration of 1,100 mg/kg). These compounds were detected in all samples, with concentrations highest at YTI East and along the western portion of the Pasha wharf.

Polychlorinated Biphenyls (PCBs) as Aroclors

PCB analysis for Aroclors in 37 samples collected reported detections primarily at YTI East and the western portion of the Pasha terminal. Aroclors 1016, 1242, 1254, and 1260 were reported within GSI samples (Table 3).

Total Petroleum Hydrocarbons (TPH)

TPH was detected in each of 30 samples analyzed for diesel-range organics (DRO) and oil-range organics (ORO), with generally higher concentrations of ORO than DRO in the samples (Table 4).

Phthalates and Polycyclic Aromatic Hydrocarbons (PAHs)

Phthalates were analyzed in 28 samples and only detected in two samples (Samples 30 and 31 from Pasha wharf vaults) (Table 5). PAHs were analyzed in 28 samples; only fluoranthene was detected in one sample (Sample 32) above the reporting limit (Table 6). Both analyses required dilution during sample preparation by the analytical laboratory due to matrix interference, which resulted in raised reporting limits for the samples.

Particle Size Results

Ten samples were analyzed for particle size. Samples were from YTI East and Pasha. Results show that sediment size ranges from silt to medium grain sand (Table 7). The samples collected at YTI East were generally finer-grained than the Pasha vault samples.

Dioxins and Dibenzofurans

Ten samples were analyzed for dioxins and dibenzofurans; however, final results are only available for seven samples (Table 8). Dioxins and dibenzofurans were detected in the seven samples, up to a maximum concentration of 59,100 picogram per gram (pg/g) of octachlorodibenzo-p-dioxin (OCDD).

Polybrominated Diphenyl Ethers (PBDE)

Ten samples were analyzed for PBDE; however, final results are only available for seven samples (Table 9). Five PBDE compounds were detected across five samples, up to a maximum concentration of 2,100 µg/kg.

CONCLUSIONS

This memorandum documents interim removal activities performed on the YTI East and Pasha terminals to date. The data presented herein, along with pending data from collected samples currently being analyzed, will be presented in the Off-Site Investigation Report, which will present a complete presentation and evaluation of data collected during off-site investigation and removal activities.

Sincerely,

Timothy S. Simpson, P.E., G.E
Principal Engineer

Timothy F. Wood, PG, CHG
Principal Geologist

Attachments:

Table 1 – Sampling Locations
Table 2 – Analytical Results for Metals
Table 3 – Analytical Results for PBCs
Table 4 – Analytical Results for TPH
Table 5 – Analytical Results for Phthalates
Table 6 – Analytical Results for PAHs
Table 7 – Particle Size Distribution
Table 8 – Analytical Results for Dioxins
Table 9 – Analytical Results for Polybrominated Diphenyl Ethers
Table 10 – Analytical Results for Soil Waste
Table 11 – Analytical Results for Water Waste
Table 12 – Drum and Waste Log
Figure 1 – Site Location Map
Figure 2 – Site Plan
Figure 3 – Sampling Locations
Attachment A – DTSC October 2021 Report
Attachment B – Health and Safety Plan
Attachment C – Sampling Photolog
Attachment D – Waste Manifests
Attachment E – Laboratory Reports

Off-Site LFM Interim Cleanup and Sampling Results Memorandum
901 New Dock Street
Terminal Island, California 90731

TABLES

Table 1 – Sampling Locations
Table 2 – Analytical Results for Metals
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Table 4 – Analytical Results for TPH
Table 5 – Analytical Results for Phthalates
Table 6 – Analytical Results for PAHs
Table 7 – Particle Size Distribution
Table 8 – Analytical Results for Dioxins
Table 9 – Analytical Results for Polybrominated Diphenyl Ethers
Table 10 – Analytical Results for Soil Waste
Table 11 – Analytical Results for Water Waste
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GSI ENVIRONMENTAL

Table 1: Interim Cleanup Samples

SA Recycling Facility

901 New Dock Street, Terminal Island, CA

Sample Number	Sample Identification	General Location	Location Description	Visual Observation for Light Fibrous Material (LFM)	Sample Type	Date	Time	Laboratory Analyses	Lab(s)	Lat	Long
1	PT01	YTI	colocated with SAT1-BF-01	Likely LFM with vegetation and sediment on top of and between the storm drain grate.	LFM mix	10/6/2021	11:05	Total metals and leachate	ATL	33.759843	-118.250912
2	PT01A	YTI	~ 5 feet north of storm drain inlet	No LFM observed; sediment on asphalt near weed growth.	No LFM; sediment	10/6/2021	11:15	Total metals and leachate	ATL	33.759856	-118.250919
3	PT02	YTI	colocated with SAT1-BF-02	Yes, LFM visually identifiable in matted deposit along rail line rail and asphalt.	LFM	10/6/2021	11:28	Total metals and leachate	ATL	33.759973	-118.251032
4	PT03	YTI	colocated with SAT1-BF-03	Yes, LFM visually identifiable in relatively thin matted deposit along the interior western edge of former truck wash trough.	LFM	10/6/2021	11:35	Total metals and leachate	ATL	33.759988	-118.251180
5	PT04	YTI	colocated with SAT1-BF-04	Yes, LFM visually identifiable in matted deposit at base of storm drain grate on inside vault wall.	LFM mix	10/6/2021	11:18	Total metals and leachate	ATL	33.759841	-118.250908
6	PT04A	YTI	inside storm drain lid	LFM possible; fibrous material present included vegetation and was wet making it difficult to ascertain composition of fibrous material.	LFM mix	10/6/2021	11:20	Total metals and leachate	ATL	33.759840	-118.250911
7	PT05	YTI	colocated with SAT1-BF-05	LFM was observed and was accumulated around transformer cage and bollards as a matted layer.	LFM	10/6/2021	11:42	Total metals and leachate	ATL	33.760259	-118.251440
8	PT05A	YTI	inside asphalt erosional channel	No LFM observed; soil/sediment in asphalt crack.	No LFM; sediment	10/6/2021	11:45	Total metals and leachate	ATL	33.760294	-118.251410
9	PT06	YTI	colocated with SAT1-BF-06	Yes, LFM visually identifiable in relatively thin matted deposit along the interior western edge of former truck wash trough.	LFM	10/6/2021	11:50	Total metals and leachate	ATL	33.760376	-118.251375
10	PT07	YTI	colocated with SAT1-BF-07	Yes, LFM visually identifiable in matted deposit along rail line rail in asphalt.	LFM	10/6/2021	11:56	Total metals and leachate	ATL	33.760427	-118.251461
11	PT08	Pasha Wharf	colocated with SAT1-BF-08	Yes, LFM visually identifiable in matted deposits mixed with vegetation, feathers, cigarette butts and other trash along the north side of vault, on the valves, and on the base of the vault.	LFM mix	10/6/2021	12:23	Total metals and leachate	ATL	33.761813	-118.251398
12	PT08A	Pasha Wharf	adjacent to wood berm/wall	No LFM observed; sediment, wood, asphalt, paint chips, feathers.	No LFM; sediment	10/6/2021	12:06	Total metals and leachate	ATL	33.761602	-118.251972
13	PT08B	Pasha Wharf	between vault VR26 and wood berm/wall	No LFM observed; sediment, wood, asphalt, paint chips, feathers.	No LFM; sediment	10/6/2021	12:11	Total metals and leachate	ATL	33.761726	-118.251631
14	PT08C	Pasha Wharf	east of vault adjacent to wood berm/wall	No LFM observed; sediment, wood, asphalt, paint chips, feathers.	No LFM; sediment	10/6/2021	12:20	Total metals and leachate	ATL	33.761820	-118.251370
15	PT02-A	YTI	east crane track	Yes, LFM visually identifiable in thick matted deposit.	LFM	12/22/2021	8:30	Suite A & B	ATL	33.760005	-118.251014
16	Sample 1	YTI	western property boundary	Yes, LFM visually identifiable in mixture of sediment and LFM.	LFM mix	1/24/2022	11:35	Suite A	ATL	33.761109	-118.251844
17	Sample 2	YTI	western property boundary	Yes, LFM visually identifiable in mixture of sediment and LFM.	LFM mix	1/24/2022	12:00	Suite A & B	ATL	33.760398	-118.251726
18	Sample 3	YTI	western property boundary	Yes, LFM visually identifiable in thick matted deposit.	LFM	1/24/2022	12:15	Suite A & B	ATL	33.759352	-118.251140
19	Sample 4	YTI	west crane track	Yes, LFM visually identifiable in thick matted deposit.	LFM	12/22/2021	11:00	Suite A	ATL	33.761345	-118.251684
20	Sample 5	Pasha Wharf	Vault 127	Yes, LFM visually identifiable in mixture of sediment and LFM.	LFM mix	12/22/2021	8:20	Suite A & B	ATL	33.761639	-118.251831
21	Sample 6	Pasha Wharf	Vault 110	Yes, LFM visually identifiable in mixture of sediment and LFM.	LFM mix	12/22/2021	9:15	Suite A	ATL	33.761862	-118.251196

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Table 1: Interim Cleanup Samples
SA Recycling Facility
901 New Dock Street, Terminal Island, CA

Sample Number	Sample Identification	General Location	Location Description	Visual Observation for Light Fibrous Material (LFM)	Sample Type	Date	Time	Laboratory Analyses	Lab(s)	Lat	Long
22	Sample 7	Pasha Wharf	Vault 109	Yes, LFM visually identifiable in mixture of sediment and LFM.	LFM mix	12/22/2021	9:30	Suite A	ATL	33.761875	-118.251159
23	Sample 8	Pasha Wharf	Vault 91	Yes, LFM visually identifiable in mixture of sediment and LFM.	LFM mix	12/22/2021	10:30	Suite A	ATL	33.762101	-118.250512
24	Sample 9	Pasha Wharf	Vault 70	Yes, LFM visually identifiable in mixture of sediment and LFM.	LFM mix	12/22/2021	10:55	Suite A	ATL	33.762330	-118.249870
25	Sample 10	Pasha Wharf	Vault 80	Yes, LFM visually identifiable in mixture of sediment and LFM.	LFM mix	12/22/2021	11:20	Suite A	ATL	33.762243	-118.250107
26	Sample 11	YTI	east crane track	Yes, LFM visually identifiable in thick matted deposit.	LFM	12/22/2021	11:30	Suite A	ATL	33.760631	-118.251510
27	Sample 12	YTI	west water conveyance system trench	Yes, LFM visually identifiable in mixture of mud and LFM.	LFM mix	2/4/2022	13:20	Suite A & B	ATL	33.760039	-118.251074
28	Sample 13	YTI	east water conveyance system trench	Yes, LFM visually identifiable in mixture of mud and LFM.	LFM mix	2/4/2022	13:25	Suite A & B	ATL	33.759952	-118.251087
29	Sample 14	YTI	on top of wall between SA and YTI property boundary	Yes, LFM visually identifiable in thick matted deposit.	LFM	2/14/2022	12:30	Suite A & B	ATL	33.759991	-118.251566
30	Sample 15	YTI	South K-rails	Yes, LFM visually identifiable in matted deposit.	LFM	3/8/2022	7:20	Suite A & B & PCB Congeners	ATL/Vista	33.759313	-118.250894
31	Sample 16	YTI	northeast K-rails	No LFM observed; road dust, sediment, and plant seeds from previously removed bushes	No LFM; sediment	3/8/2022	7:45	Suite A	ATL	33.760332	-118.251136
32	Sample 17	YTI	northeast K-rails	No LFM observed; road dust, sediment, and plant seeds from previously removed bushes	No LFM; sediment	3/8/2022	8:00	Suite A	ATL	33.760713	-118.251319
33	Sample 18	YTI	northeast K-rails	No LFM observed; road dust, sediment, and plant seeds from previously removed bushes	No LFM; sediment	3/8/2022	8:20	Suite A	ATL	33.761122	-118.251542
34	Sample 19	Pasha	Pasha vaults	Yes, LFM visually identifiable in mixture of sediment and LFM.	LFM mix	3/14/2022	12:00	Suite A & B	ATL	33.762510	-118.249400
35	Sample 20	Pasha	Pasha vaults	Yes, LFM visually identifiable in mixture of sediment and LFM.	LFM mix	3/14/2022	12:02	Suite A	ATL	33.762640	-118.248990
36	Sample 21	Pasha	Pasha vaults	Yes, LFM visually identifiable in mixture of sediment and LFM.	LFM mix	3/14/2022	12:05	Suite A	ATL	33.762640	-118.248990
37	Sample 22	Pasha	Pasha vaults	Yes, LFM visually identifiable in mixture of sediment and LFM.	LFM mix	3/14/2022	12:10	Suite A	ATL	33.762640	-118.248990
38	Sample 23	Pasha	Pasha vaults	Yes, LFM visually identifiable in mixture of sediment and LFM.	LFM mix	3/15/2022	7:30	Suite A	ATL	33.762460	-118.249590
39	Sample 24	Pasha	Pasha vaults	Yes, LFM visually identifiable in mixture of sediment and LFM.	LFM mix	3/15/2022	7:55	Suite A	ATL	33.762460	-118.249590
40	Sample 25	Pasha	Pasha vaults	Yes, LFM visually identifiable in mixture of sediment and LFM.	LFM mix	3/15/2022	9:00	Suite A	ATL	33.762820	-118.248350
41	Sample 26	Pasha	Pasha vaults	Yes, LFM visually identifiable in mixture of sediment and LFM.	LFM mix	3/15/2022	10:03	Suite A	ATL	33.762820	-118.248350
42	Sample 27	Pasha	Pasha vaults	Yes, LFM visually identifiable in mixture of sediment and LFM.	LFM mix	3/15/2022	10:10	Suite A	ATL	33.762820	-118.248350
43	Sample 28	Pasha	Pasha vaults	Yes, LFM visually identifiable in mixture of sediment and LFM.	LFM mix	3/15/2022	10:15	Suite A & B	ATL	33.763040	-118.247940
44	Sample 29	Pasha	Pasha vaults	Yes, LFM visually identifiable in mixture of sediment and LFM.	LFM mix	3/15/2022	10:40	Suite A	ATL	33.763040	-118.247800
45	Sample 30	Pasha	Pasha vaults	Yes, LFM visually identifiable in mixture of sediment and LFM.	LFM mix	3/15/2022	11:15	Suite A	ATL	33.763040	-118.247800

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Table 1: Interim Cleanup Samples
SA Recycling Facility
901 New Dock Street, Terminal Island, CA

Sample Number	Sample Identification	General Location	Location Description	Visual Observation for Light Fibrous Material (LFM)	Sample Type	Date	Time	Laboratory Analyses	Lab(s)	Lat	Long
46	Sample 31	Pasha	Pasha vaults	Yes, LFM visually identifiable in mixture of sediment and LFM.	LFM mix	3/16/2022	7:40	Suite A	ATL	33.763290	-118.247180
47	Sample 32	Pasha	Pasha vaults	Yes, LFM visually identifiable in mixture of sediment and LFM.	LFM mix	3/16/2022	7:45	Suite A	ATL	33.763410	-118.246840
48	Sample 33	Pasha	Pasha vaults	Yes, LFM visually identifiable in mixture of sediment and LFM.	LFM mix	3/16/2022	8:30	Suite A	ATL	33.763410	-118.246840
49	Sample 34	Pasha	Pasha vaults	Yes, LFM visually identifiable in mixture of sediment and LFM.	LFM mix	3/16/2022	9:00	Suite A	ATL	33.763640	-118.246110
50	Sample 35	Pasha	Pasha vaults	Yes, LFM visually identifiable in mixture of sediment and LFM.	LFM mix	3/16/2022	11:20	Suite A	ATL	33.763820	-118.245710
51	Sample 36	Pasha	Pasha vaults	Yes, LFM visually identifiable in mixture of sediment and LFM.	LFM mix	3/16/2022	11:25	Suite A & B	ATL	33.763820	-118.245710
52	Sample 40	New Dock Street	New Dock Street	Yes, clusters of fibers observed, most likely LFM	LFM mix	3/31/2022	9:35	Suite A	ATL	33.757090	-118.248960
53	Sample 41	New Dock Street	New Dock Street	Yes, but only few LFM amount observed.	LFM mix	3/31/2022	9:50	Suite A	ATL	33.755920	-118.251730
54	Sample 42	New Dock Street	New Dock Street	Fibers observed, but not sure if fiber is LFM or from vegetation beside sample location (palm tree).	LFM mix	3/31/2022	10:50	Suite A	ATL	33.757290	-118.248440
55	Sample 43	New Dock Street	New Dock Street	Yes, clusters of LFM gathered at the bottom of the electrical pole.	LFM mix	3/31/2022	11:00	Suite A & B	ATL	33.756800	-118.249580
56	Sample 44	New Dock Street	New Dock Street	Yes, layers of LFM visually identifiable.	LFM mix	3/31/2022	11:05	Suite A	ATL	33.756750	-118.249750
57	Sample 45	New Dock Street	New Dock Street	Yes, layers of LFM visually identifiable.	LFM mix	3/31/2022	11:10	Suite A	ATL	33.756450	-118.250490
58	Sample 46	New Dock Street	New Dock Street	Yes, but only few LFM amount observed.	LFM mix	3/31/2022	11:15	Suite A	ATL	33.756250	-118.250960
59	Sample 47	New Dock Street	New Dock Street	Yes, layers of LFM visually identifiable.	LFM mix	3/31/2022	11:25	Suite A	ATL	33.755980	-118.251660
60	Sample 48	New Dock Street	New Dock Street	No LFM observed; fine grains and sediments observed.	No LFM; sediment	3/31/2022	12:55	Suite A	ATL	33.756810	-118.249560
61	Sample 49	Pasha	Pasha wharf cleanup	Yes, layers of LFM visually identifiable, and a cluster of fiber (most likely LFM) found.	LFM mix	4/6/2022	9:25	Suite A	ATL	33.761780	-118.251420
62	Sample 50	Pasha	Pasha wharf cleanup	Yes, layers of LFM visually identifiable.	LFM mix	4/6/2022	10:30	Suite A & B	ATL	33.761700	-118.251310
63	Sample 51	Pasha	Pasha wharf front rail	No LFM observed; road dust and sediment.	No LFM; sediment	4/11/2022	7:45	Suite A	ATL	33.763636	-118.246154
64	Sample 52	Pasha	Pasha wharf front rail	No LFM observed; road dust and sediment.	No LFM; sediment	4/11/2022	8:20	Suite A	ATL	33.763810	-118.245674
65	Sample 53	Pasha	Pasha wharf front rail	No LFM observed; road dust and sediment.	No LFM; sediment	4/11/2022	12:20	Suite A	ATL	33.763344	-118.246836
66	Sample 54	Pasha	Pasha wharf front rail	No LFM observed; road dust and sediment.	No LFM; sediment	4/13/2022	7:50	Suite A	ATL	33.763306	-118.247116
67	Sample 55	Pasha	Pasha wharf front rail	No LFM observed; road dust and sediment.	No LFM; sediment	4/13/2022	8:00	Suite A	ATL	33.763070	-118.247769
68	Sample 56	Pasha	Pasha wharf front rail	No LFM observed; road dust and sediment.	No LFM; sediment	4/13/2022	8:20	Suite A	ATL	33.762859	-118.248387
69	Sample 57	Pasha	Pasha wharf front rail	Yes, some LFM observed within rail sediment	LFM mix	4/14/2022	7:35	Suite A & B & PCB Congeners	ATL/Vista	33.762655	-118.248969
70	Sample 58	Pasha	Pasha wharf front rail	Yes, some LFM observed within rail sediment	LFM mix	4/14/2022	7:55	Suite A	ATL	33.762483	-118.249455
71	Sample 59	Pasha	Pasha wharf front rail	Yes, some LFM observed within rail sediment	LFM mix	4/14/2022	8:30	Suite A & B & PCB Congeners	ATL/Vista	33.762423	-118.249611
72	Sample 60	Pasha	Pasha wharf cleanup, no front rail	No LFM observed; road dust and sediment.	No LFM; sediment	4/15/2022	8:10	Suite A	ATL	33.762241	-118.250134

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Table 1: Interim Cleanup Samples

SA Recycling Facility

901 New Dock Street, Terminal Island, CA

Sample Number	Sample Identification	General Location	Location Description	Visual Observation for Light Fibrous Material (LFM)	Sample Type	Date	Time	Laboratory Analyses	Lab(s)	Lat	Long
73	Sample 61	Pasha	Pasha wharf cleanup, no front rail	No LFM observed; road dust and sediment.	No LFM; sediment	4/15/2022	8:25	Suite A	ATL	33.762185	-118.250290
74	Sample 62	Pasha	Pasha wharf cleanup, no front rail	No LFM observed; road dust and sediment.	No LFM; sediment	4/15/2022	8:40	Suite A & B & PCB Congeners	ATL/Vista	33.762092	-118.250553
75	Sample 63	Pasha	Pasha wharf cleanup, boundary with SATI	Yes, LFM visually identified in matted deposit with some slight sediment and dust mixed in.	LFM	4/19/2022	10:30	Suite A & B & PCB Congeners	ATL/Vista	33.761411	-118.251984
76	Sample 64	Pasha	Pasha wharf cleanup, boundary with SATI	No LFM visually identified. Road dust and sediment	No LFM; sediment	4/18/2022	11:50	Suite A	ATL/Vista	33.761380	-118.251966

Notes:

1. Soil samples collected by GSI.
2. Suite A = metals, PCB Aroclors, polycyclic aromatic hydrocarbons, phthalates, total petroleum hydrocarbons, percent moisture.
   Suite B = grain size, dioxins and dibenzofurans, and polybrominated diphenyl ethers.

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Table 2: Analytical Results for Metals (TTLC, STLC, TCLP)

SA Recycling Facility

901 New Dock Street, Terminal Island, CA

General Location	Sample Identification	Sampler	Location Description	Depth (feet bgs)	Date Collected	Units	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc	Hexavalent Chromium	% Moisture (by Weight)
Initial Sampling - TTLC Results																									
YTI	SATI-BF-01	DTSC	--	1	9/1/2021	mg/kg	15.3	ND	411	ND	ND	114	13.2	258	449	0.751	16.9	80.0	ND	ND	ND	50.5	4810	--	--
	PT01	GSI	colocated with SATI-BF-01	1	10/6/2021	mg/kg	--	--	--	--	3.8	--	--	--	230	--	--	--	--	--	--	--	3200	--	--
	PT01A	GSI	~ 5 feet north of storm drain inlet	1	10/6/2021	mg/kg	--	--	--	--	3.4	--	--	--	220	--	--	--	--	--	--	--	2800	--	--
YTI	SATI-BF-02	DTSC	--	1	9/1/2021	mg/kg	34.3	10.9	665	ND	15.3	219	23.1	477	1100	2.15	26.8	178	ND	ND	ND	65.0	6700	--	--
	PT02	GSI	colocated with SATI-BF-02	1	10/6/2021	mg/kg	--	--	--	--	19	--	--	--	1100	--	--	--	--	--	--	--	5700	--	--
YTI	SATI-BF-03	DTSC	--	1	9/1/2021	mg/kg	49.2	17.7	965	ND	27.1	278	31.3	715	1590	4.96	37.0	253	ND	ND	ND	87.0	11900	--	--
	PT03	GSI	colocated with SATI-BF-03	1	10/6/2021	mg/kg	--	--	--	--	29	--	--	--	1400	--	--	--	--	--	--	--	9700	--	--
YTI	SATI-BF-04	DTSC	--	1	9/1/2021	mg/kg	27.5	ND	505	ND	ND	174	20.7	376	850	7.58	22.7	139	ND	ND	ND	65.5	7450	--	--
	PT04	GSI	colocated with SATI-BF-04	1	10/6/2021	mg/kg	--	--	--	--	13	--	--	--	770	--	--	--	--	--	--	--	8000	--	--
	PT04A	GSI	inside storm drain lid	1	10/6/2021	mg/kg	--	--	--	--	7.5	--	--	--	500	--	--	--	--	--	--	--	4100	--	--
YTI	SATI-BF-05	DTSC	--	1	9/1/2021	mg/kg	34.6	11.4	585	ND	15.5	289	22.6	466	1030	4.13	31.6	208	ND	ND	ND	55.0	8150	--	--
	PT05	GSI	colocated with SATI-BF-05	1	10/6/2021	mg/kg	--	--	--	--	26	--	--	--	1300	--	--	--	--	--	--	--	8700	--	--
	PT05A	GSI	inside asphalt erosional channel	1	10/6/2021	mg/kg	--	--	--	--	13	--	--	--	740	--	--	--	--	--	--	--	5300	--	--
YTI	SATI-BF-06	DTSC	--	1	9/1/2021	mg/kg	43.0	15.5	870	ND	21.1	394	31.0	640	1250	5.43	44.2	293	ND	ND	ND	77.0	9850	--	--
	PT06	GSI	colocated with SATI-BF-06	1	10/6/2021	mg/kg	--	--	--	--	25	--	--	--	1200	--	--	--	--	--	--	--	7900	--	--
YTI	SATI-BF-07	DTSC	--	1	9/1/2021	mg/kg	42.2	14.5	765	ND	18.3	475	29.7	635	1220	5.19	49.4	324	ND	ND	ND	72.5	9550	--	--
	PT07	GSI	colocated with SATI-BF-07	1	10/6/2021	mg/kg	--	--	--	--	24	--	--	--	1200	--	--	--	--	--	--	--	8700	--	--
Pahsa Wharf	SATI-BF-08	DTSC	--	1	9/1/2021	mg/kg	ND	ND	130	ND	ND	86.5	ND	87.0	250	0.902	ND	41.5	ND	ND	ND	36.7	2450	--	--
	PT08	GSI	colocated with SATI-BF-08	1	10/6/2021	mg/kg	--	--	--	--	4.1	--	--	--	410	--	--	--	--	--	--	--	2700	--	--
	PT08A	GSI	adjacent to wood berm/wall	1	10/6/2021	mg/kg	--	--	--	--	1.5	--	--	--	150	--	--	--	--	--	--	--	1100	--	--
	PT08B	GSI	between vault VR26 and wood berm/wall	1	10/6/2021	mg/kg	--	--	--	--	2.2	--	--	--	210	--	--	--	--	--	--	--	1300	--	--
	PT08C	GSI	east of vault adjacent to wood berm/wall	1	10/6/2021	mg/kg	--	--	--	--	1.2	--	--	--	170	--	--	--	--	--	--	--	790	--	--
Sampling During Removal - TTLC Results																									
YTI	PT02-A	GSI	east crane track	1	12/22/2021	mg/kg	7.6	7.4	540	<1.0	16	160	20	390	1000	1.9	22	140	<1.0	2.6	<1.0	52	5500	18	<0.10
YTI	Sample 1	GSI	western property boundary	1	1/24/2022	mg/kg	<2.0	14	730	<1.0	27	530	27	710	1400	3.6	50	290	<1.0	2.5	<1.0	71	12000	34	1.1
YTI	Sample 2	GSI	western property boundary	1	1/24/2022	mg/kg	<2.1	11	670	<1.1	14	260	18	430	820	3.2	44	210	<1.1	1.8	<1.1	33	6600	<1.1	5.7
YTI	Sample 3	GSI	western property boundary	1	1/24/2022	mg/kg	<2.0	10	670	<1.0	13	250	17	430	820	1.4	45	200	<1.0	2.7	<1.0	31	6000	13	0.80
YTI	Sample 4	GSI	west crane track	1	12/22/2021	mg/kg	<2.0	11	650	<1.0	29	240	27	570	1200	2.6	33	220	<1.0	4.0	<1.0	90	11000	14	1.6
Pasha Wharf	Sample 5	GSI	Vault 127	1	12/22/2021	mg/kg	<2.2	4.3	410	<1.1	2.8	400	8.4	410	1600	0.30	9.8	51	<1.1	<1.1	<1.1	46	3100	260	9.5
Pasha Wharf	Sample 6	GSI	Vault 110	1	12/22/2021	mg/kg	<2.5	4.0	130	<1.2	2.9	69	8.0	110	300	0.26	8.2	39	<1.2	<1.2	<1.2	41	20000	6.7	23
Pasha Wharf	Sample 7	GSI	Vault 109	1	12/22/2021	mg/kg	<2.2	3.0	170	<1.1	3.9	76	7.9	92	420	0.20	8.1	41	<1.1	<1.1	<1.1	42	6200	6.0	9.7
Pasha Wharf	Sample 8	GSI	Vault 91	1	12/22/2021	mg/kg	<2.3	2.7	450	<1.2	3.5	100	9.8	160	180	0.13	11	48	<1.2	1.3	<1.2	27	2500	7.0	17
Pasha Wharf	Sample 9	GSI	Vault 70	1	12/22/2021	mg/kg	<2.4	1.6	150	<1.2	2.4	70	7.4	94	120	<0.12	8.7	34	<1.2	<1.2	<1.2	27	2000	75	22
Pasha Wharf	Sample 10	GSI	Vault 80	1	12/22/2021	mg/kg	<2.0	2.7	120	<1.0	2.4	53	6.3	91	79	<0.10	7.7	30	<1.0	<1.0	<1.0	26	2900	3.0	1.2
YTI	Sample 11	GSI	east crane track	1	12/22/2021	mg/kg	3.6	8.7	550	<1.1	17	320	23	440	1100	2.6	29	200	<1.1	2.9	<1.1	68	7100	18	12
YTI	Sample 12	GSI	west water conveyance system trench	1	2/4/2022	mg/kg	<26	<13	730	<13	24	200	25	450	1100	3.1	29	170	<13	<13	<13	61	6500	13	29
YTI	Sample 13	GSI	east water conveyance system trench	1	2/4/2022	mg/kg	<28	19	1300	<14	36	240	25	790	1800	3.3	32	230	17	<14	<14	72	8900	9.5	38
YTI	Sample 14	GSI	on top of wall between SA and YTI property boundary	n/a	2/14/2022	mg/kg	<20	16	1300	<10	57	380	46	1100	1900	7.3	74	650	76	<10	<10	50	14000	12	0.1
YTI	Sample 15	GSI	South K-rails	1	3/8/2022	mg/kg	28	17	770	1.7	21	230	37	860	6200		97	220	23	3.0	<1.1	58	3000	12	7.9
YTI	Sample 16	GSI	northeast K-rails	1	3/8/2022	mg/kg	3.4	3.3	230	1.0	2.8	64	7.0	120	160	0.30	9.1	37	5.4	1.3	<1.0	31	2500	33	0.7

GSI ENVIRONMENTAL

Table 2: Analytical Results for Metals (TTLC, STLC, TCLP)

SA Recycling Facility

901 New Dock Street, Terminal Island, CA

General Location	Sample Identification	Sampler	Location Description	Depth (feet bgs)	Date Collected	Units	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc	Hexavalent Chromium	% Moisture (by Weight)
YTI	Sample 17	GSI	northeast K-rails	1	3/8/2022	mg/kg	3.1	3.4	160	<1.0	2.2	57	5.6	94	140	0.13	7.7	69	5.4	<1.0	<1.0	26	2000	8.6	1.2
YTI	Sample 18	GSI	northeast K-rails	1	3/8/2022	mg/kg	4.4	4.4	200	1.1	3.7	80	8.6	130	230	0.46	11	42	6.2	1.3	<1.0	35	220	12	1.1
Pasha Wharf	Sample 19	GSI	Pasha wharf vaults	1 to 3	3/14/2022	mg/kg	8.4	3.1	220	<1.0	4.8	100	8.6	140	180	0.20	8.8	41	8.7	<1.0	<1.0	30	2600	14	1
Pasha Wharf	Sample 20	GSI	Pasha wharf vaults	1 to 3	3/14/2022	mg/kg	7.1	5.0	380	<1.0	3.9	94	8.8	130	210	0.24	9.6	37	7.0	<1.0	<1.0	38	2400	10	0.7
Pasha Wharf	Sample 21	GSI	Pasha wharf vaults	1 to 3	3/14/2022	mg/kg	5.8	9.1	280	<1.0	3.4	85	7.4	120	190	0.21	7.9	41	4.9	<1.0	<1.0	40	2200	<1.0	1.2
Pasha Wharf	Sample 22	GSI	Pasha wharf vaults	1 to 3	3/14/2022	mg/kg	4.5	3.9	160	<1.1	2.8	64	6.8	93	120	<0.11	6.5	29	4.1	<1.1	<1.1	25	2800	<1.1	6.1
Pasha Wharf	Sample 23	GSI	Pasha wharf vaults	1 to 3	3/15/2022	mg/kg	8.6	4.1	280	<1.1	5.3	110	11	150	120	<0.11	13	42	7.6	<1.1	<1.1	31	2800	<1.1	5.6
Pasha Wharf	Sample 24	GSI	Pasha wharf vaults	1 to 3	3/15/2022	mg/kg	7.5	3.4	180	<1.0	4.0	77	9.0	110	110	<0.10	6.6	34	6.7	2.3	<1.0	25	2100	<1.0	0.8
Pasha Wharf	Sample 25	GSI	Pasha wharf vaults	1 to 3	3/15/2022	mg/kg	5.5	4.0	140	<1.0	3.2	85	6.6	150	97	<0.10	7.7	38	5.3	<1.0	<1.0	26	2000	<1.0	2.8
Pasha Wharf	Sample 26	GSI	Pasha wharf vaults	1 to 3	3/15/2022	mg/kg	8.5	4.8	250	1.1	5.4	150	11	160	300	<0.10	15	140	7.6	<1.0	<1.0	41	4500	<1.0	3.2
Pasha Wharf	Sample 27	GSI	Pasha wharf vaults	1 to 3	3/15/2022	mg/kg	7.1	3.3	230	<1.0	3.9	93	9.0	140	120	<0.10	10	41	6.2	<1.0	<1.0	34	2900	<5.2	4.5
Pasha Wharf	Sample 28	GSI	Pasha wharf vaults	1 to 3	3/15/2022	mg/kg	10	<1.4	310	<1.4	6.5	120	11	180	150	<0.14	11	56	14	<1.4	<1.4	52	3000	<1.4	26.6
Pasha Wharf	Sample 29	GSI	Pasha wharf vaults	1 to 3	3/15/2022	mg/kg	6.5	3.1	110	<1.0	3.6	80	6.7	150	58	<0.10	8.8	36	7.1	<1.0	<1.0	30	1300	4.1	0.5
Pasha Wharf	Sample 30	GSI	Pasha wharf vaults	1 to 3	3/15/2022	mg/kg	12	3.8	430	1.1	5.0	120	11	180	120	0.12	12	62	10	<1.0	<1.0	51	2600	<1.0	0.8
Pasha Wharf	Sample 31	GSI	Pasha wharf vaults	1 to 3	3/16/2022	mg/kg	11	6.4	310	<1.0	5.5	130	12	220	140	<0.10	15	60	11	<1.0	<1.0	34	2500	13	0.6
Pasha Wharf	Sample 32	GSI	Pasha wharf vaults	1 to 3	3/16/2022	mg/kg	10	6.8	210	<1.0	4.8	130	11	220	110	0.22	16	64	8.8	<1.0	<1.0	32	2800	<1.0	2.3
Pasha Wharf	Sample 33	GSI	Pasha wharf vaults	1 to 3	3/16/2022	mg/kg	12	4.9	290	<1.5	5.8	160	12	300	73	<0.15	20	80	9.2	<1.5	<1.5	36	2500	<1.5	33.5
Pasha Wharf	Sample 34	GSI	Pasha wharf vaults	1 to 3	3/16/2022	mg/kg	7.4	3.5	200	<1.0	3.4	110	7.6	140	140	<0.10	13	54	5.6	<1.0	<1.0	28	1900	<1.0	3.5
Pasha Wharf	Sample 35	GSI	Pasha wharf vaults	1 to 3	3/16/2022	mg/kg	7.2	4.1	220	<1.1	3.0	84	6.6	130	140	<0.11	10	38	4.7	1.4	<1.1	28	2700	<1.1	6.4
Pasha Wharf	Sample 36	GSI	Pasha wharf vaults	1 to 3	3/16/2022	mg/kg	7.4	4.7	250	<1.0	2.5	95	6.6	98	220	<0.10	10	31	3.7	1.2	<1.0	21	2500	<1.0	2.2
Initial Sampling - STLC Results																									
YTI	SATI-BF-01	DTSC	vault, south of crane tracks	1	9/1/2021	mg/L	0.734	ND	10.1	ND	0.538	2.54	0.606	1.98	30.0	ND	0.566	2.96	ND	ND	ND	1.65	398	--	--
YTI	SATI-BF-02	DTSC	east crane track	1	9/1/2021	mg/L	1.44	0.328	12.2	ND	1.51	4.18	0.910	2.56	79.5	ND	0.850	5.30	ND	ND	ND	2.86	590	--	--
YTI	SATI-BF-03	DTSC	west crane track	1	9/1/2021	mg/L	1.59	ND	13.1	ND	2.26	4.48	1.15	3.02	88.8	0.0041	0.882	6.34	ND	ND	ND	3.46	912	--	--
YTI	SATI-BF-04	DTSC	vault, south of crane tracks	1	9/1/2021	mg/L	1.34	0.436	13.6	ND	1.04	4.42	1.08	3.66	61.8	ND	0.842	6.70	ND	ND	ND	2.98	774	--	--
YTI	SATI-BF-05	DTSC	near transformer	1	9/1/2021	mg/L	1.38	ND	9.04	ND	1.62	4.44	0.860	1.54	64.6	ND	1.02	5.44	ND	ND	ND	2.16	808	--	--
YTI	SATI-BF-06	DTSC	west crane track	1	9/1/2021	mg/L	1.49	ND	11.8	ND	1.80	4.34	1.07	7.08	70.0	0.0045	0.806	5.94	ND	ND	ND	3.10	820	--	--
YTI	SATI-BF-07	DTSC	north of transformer	1	9/1/2021	mg/L	1.55	ND	12.0	ND	1.91	4.80	1.06	3.02	76.2	ND	1.03	6.72	ND	ND	ND	3.10	926	--	--
Pasha Wharf	SATI-BF-08	DTSC	Pasha Wharf	1	9/1/2021	mg/L	ND	ND	4.58	ND	ND	1.19	ND	1.19	10.1	ND	ND	0.814	ND	ND	ND	0.962	262	--	--
Initial Sampling - TCLP Results																									
YTI	SATI-BF-01	DTSC	vault, south of crane tracks	1	9/1/2021	mg/L	--	ND	1.50	--	ND	ND	--	--	0.302	--	--	--	ND	ND	--	--	--	--	--
YTI	SATI-BF-02	DTSC	east crane track	1	9/1/2021	mg/L	--	ND	1.46	--	ND	ND	--	--	0.494	--	--	--	ND	ND	--	--	--	--	--
YTI	SATI-BF-03	DTSC	west crane track	1	9/1/2021	mg/L	--	ND	3.87	--	0.701	ND	--	--	2.70	--	--	--	ND	ND	--	--	--	--	--
YTI	SATI-BF-04	DTSC	vault, south of crane tracks	1	9/1/2021	mg/L	--	ND	1.73	--	ND	ND	--	--	0.562	--	--	--	ND	ND	--	--	--	--	--
YTI	SATI-BF-05	DTSC	near transformer	1	9/1/2021	mg/L	--	ND	1.39	--	0.290	ND	--	--	0.676	--	--	--	ND	ND	--	--	--	--	--
YTI	SATI-BF-06	DTSC	west crane track	1	9/1/2021	mg/L	--	ND	1.81	--	0.230	ND	--	--	ND	--	--	--	ND	ND	--	--	--	--	--
YTI	SATI-BF-07	DTSC	north of transformer	1	9/1/2021	mg/L	--	ND	1.89	--	0.218	ND	--	--	0.218	--	--	--	ND	ND	--	--	--	--	--
Pasha Wharf	SATI-BF-08	DTSC	Pasha Wharf	1	9/1/2021	mg/L	--	ND	0.616	--	ND	ND	--	--	ND	--	--	--	ND	ND	--	--	--	--	--

Note:
1. Soil samples collected by GSI were analyzed by Advanced Technology Laboratories (ATL).
2. DTSC sample results are reproduced from the DTSC report PDF.

Abbreviations

mg/kg = milligrams per kilogram
mg/L = milligrams per liter
bgs = below ground surface

-- = sample not analyzed for analyte
ND = not detected above laboratory reporting limits
GSI = GSI Environmental Inc.

STLC = Soluble Threshold Limit Concentration
TCLP = Toxicity Characteristic Leaching Procedure
TTLC = Total Threshold Limit Concentration

Pasha = Pasha Stevedoring & Terminals LP; 1001 New Dock Street
YTI = Yusen Terminals, LLC; 701 New Dock Street

Table 3: Analytical Results for PCBs
SA Recycling Facility
901 New Dock Street, Terminal Island, CA

General Location	Sample Identification	Sampler	Location Description	Depth (feet bgs)	Date Collected	Units	PCB-1016	PCB-1221	PCB-1232	PCB-1242	PCB-1248	PCB-1254	PCB-1260	Total PCBs	Total PCBs GSI (calculated)
YTI	SATI-BF-01	DTSC	vault, south of crane tracks	1	9/1/2021	µg/kg	ND	ND	ND	ND	382	ND	488	870	870
YTI	SATI-BF-02	DTSC	east crane track	1	9/1/2021	µg/kg	ND	ND	ND	ND	1690	ND	901	2591	2591
YTI	SATI-BF-03	DTSC	west crane track	1	9/1/2021	µg/kg	ND	ND	ND	ND	1930	ND	1160	3090	3090
YTI	SATI-BF-04	DTSC	vault, south of crane tracks	1	9/1/2021	µg/kg	ND	ND	ND	ND	1430	ND	1250	2680	2680
YTI	SATI-BF-05	DTSC	near transformer	1	9/1/2021	µg/kg	ND	ND	ND	ND	1560	ND	1250	2810	2810
YTI	SATI-BF-06	DTSC	west crane track	1	9/1/2021	µg/kg	ND	ND	ND	ND	1930	ND	1030	2960	2960
YTI	SATI-BF-07	DTSC	north of transformer	1	9/1/2021	µg/kg	ND	ND	ND	ND	1420	ND	925	2345	2345
Pasha Wharf	SATI-BF-08	DTSC	Pasha Wharf	1	9/1/2021	µg/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
YTI	PT02-A	GSI	east crane track	1	12/22/2021	µg/kg	63 J	<16 J	<16 J	<16 J	<16 J	120 J	85 J	--	268
YTI	Sample 1	GSI	western property boundary	1	1/24/2022	µg/kg	<16	<16	<16	170	<16	270	120	--	560
YTI	Sample 2	GSI	western property boundary	1	1/24/2022	µg/kg	<17	<17	<17	240	<17	350	200	--	790
YTI	Sample 3	GSI	western property boundary	1	1/24/2022	µg/kg	<160	<160	<160	500	<160	530	2700	--	3730
YTI	Sample 4	GSI	west crane track	1	12/22/2021	µg/kg	220 J	<16 J	<16 J	<16 J	<16 J	400 J	240 J	--	860
Pasha Wharf	Sample 5	GSI	Vault 127	1	12/22/2021	µg/kg	120 J	<18 J	<18 J	<18 J	<18 J	270 J	200 J	--	590
Pasha Wharf	Sample 6	GSI	Vault 110	1	12/22/2021	µg/kg	51 J	<20 J	<20 J	<20 J	<20 J	120 J	80 J	--	251
Pasha Wharf	Sample 7	GSI	Vault 109	1	12/22/2021	µg/kg	160 J	<18 J	<18 J	<18 J	<18 J	290 J	210 J	--	660
Pasha Wharf	Sample 8	GSI	Vault 91	1	12/22/2021	µg/kg	74 J	<19 J	<19 J	<19 J	<19 J	120 J	110 J	--	304
Pasha Wharf	Sample 9	GSI	Vault 70	1	12/22/2021	µg/kg	120 J	<20 J	<20 J	<20 J	<20 J	150 J	200 J	--	470
Pasha Wharf	Sample 10	GSI	Vault 80	1	12/22/2021	µg/kg	84 J	<16 J	<16 J	<16 J	<16 J	93 J	120 J	--	297
YTI	Sample 11	GSI	east crane track	1	12/22/2021	µg/kg	140 J	<18 J	<18 J	<18 J	<18 J	280 J	170 J	--	590
YTI	Sample 12	GSI	west water conveyance system trench	1	2/4/2022	µg/kg	<100	<100	<100	590	<100	780	480	--	1850
YTI	Sample 13	GSI	east water conveyance system trench	1	2/4/2022	µg/kg	<110	<110	<110	790	<110	1400	820	--	3010
YTI	Sample 14	GSI	on top of wall between SA and YTI property boundary	n/a	2/14/2022	µg/kg	<160	<160	<160	1500	<160	1500	710	--	3710
YTI	Sample 15	GSI	South K-rails	1	3/8/2022	µg/kg	<52	<52	<52	880	<52	840	520	--	2240
YTI	Sample 16	GSI	northeast K-rails	1	3/8/2022	µg/kg	<48	<48	<48	140	<48	260	98	--	498
YTI	Sample 17	GSI	northeast K-rails	1	3/8/2022	µg/kg	<49	<49	<49	130	<49	210	100	--	440
YTI	Sample 18	GSI	northeast K-rails	1	3/8/2022	µg/kg	<49	<49	<49	130	<49	210	96	--	436
Pasha Wharf	Sample 19	GSI	Pasha wharf vaults	1 to 3	3/14/2022	µg/kg	<16	<16	<16	<16	<16	<16	<16	--	ND
Pasha Wharf	Sample 20	GSI	Pasha wharf vaults	1 to 3	3/14/2022	µg/kg	<16	<16	<16	<16	<16	<16	<16	--	ND
Pasha Wharf	Sample 21	GSI	Pasha wharf vaults	1 to 3	3/14/2022	µg/kg	<16	<16	<16	<16	<16	<16	<16	--	ND
Pasha Wharf	Sample 22	GSI	Pasha wharf vaults	1 to 3	3/14/2022	µg/kg	<17	<17	<17	<17	<17	<17	<17	--	ND
Pasha Wharf	Sample 23	GSI	Pasha wharf vaults	1 to 3	3/15/2022	µg/kg	<17	<17	<17	<17	<17	<17	<17	--	ND
Pasha Wharf	Sample 24	GSI	Pasha wharf vaults	1 to 3	3/15/2022	µg/kg	<16	<16	<16	<16	<16	<16	<16	--	ND
Pasha Wharf	Sample 25	GSI	Pasha wharf vaults	1 to 3	3/15/2022	µg/kg	<16	<16	<16	<16	<16	<16	<16	--	ND
Pasha Wharf	Sample 26	GSI	Pasha wharf vaults	1 to 3	3/15/2022	µg/kg	<17	<17	<17	<17	<17	<17	<17	--	ND
Pasha Wharf	Sample 27	GSI	Pasha wharf vaults	1 to 3	3/15/2022	µg/kg	<17	<17	<17	<17	<17	<17	<17	--	ND
Pasha Wharf	Sample 28	GSI	Pasha wharf vaults	1 to 3	3/15/2022	µg/kg	<22	<22	<22	<22	<22	78	45	--	123
Pasha Wharf	Sample 29	GSI	Pasha wharf vaults	1 to 3	3/15/2022	µg/kg	<16	<16	<16	<16	<16	<16	<16	--	ND
Pasha Wharf	Sample 30	GSI	Pasha wharf vaults	1 to 3	3/15/2022	µg/kg	<16	<16	<16	<16	<16	<16	<16	--	ND
Pasha Wharf	Sample 31	GSI	Pasha wharf vaults	1 to 3	3/16/2022	µg/kg	<24	<24	<24	<24	<24	<24	<24	--	ND
Pasha Wharf	Sample 32	GSI	Pasha wharf vaults	1 to 3	3/16/2022	µg/kg	<25	<25	<25	<25	<25	<25	<25	--	ND
Pasha Wharf	Sample 33	GSI	Pasha wharf vaults	1 to 3	3/16/2022	µg/kg	<36	<36	<36	<36	<36	<36	<36	--	ND
Pasha Wharf	Sample 34	GSI	Pasha wharf vaults	1 to 3	3/16/2022	µg/kg	<25	<25	<25	<25	<25	<25	<25	--	ND
Pasha Wharf	Sample 35	GSI	Pasha wharf vaults	1 to 3	3/16/2022	µg/kg	<51	<51	<51	<51	<51	<51	<51	--	ND
Pasha Wharf	Sample 36	GSI	Pasha wharf vaults	1 to 3	3/16/2022	µg/kg	<25	<25	<25	<25	<25	<25	<25	--	ND

Notes:
1. Soil samples collected by GSI were analyzed by Advanced Technology Laboratories (ATL).
2. DTSC sample results are reproduced from the DTSC report PDF.

Abbreviations
µg/kg = microgram per kilogram
bgs = below ground surface
-- = sample not analyzed for analyte
ND = not detected above laboratory reporting limits
GSI = GSI Environmental Inc.
Pasha = Pasha Stevedoring & Terminals LP; 1001 New Dock Street
YTI = Yusen Terminals, LLC; 701 New Dock Street

GSI ENVIRONMENTAL

Table 4: Analytical Results for TPH
SA Recycling Facility
901 New Dock Street, Terminal Island, CA

General Location	Sample Identification	Location Description	Depth (feet bgs)	Date Collected	Units	TPH C10-C28 (DRO)	TPH C20-C38 (ORO)
YTI	PT02-A	east crane track	1	12/22/2021	mg/kg	<2000	<2000
YTI	Sample 1	western property boundary	1	1/24/2022	mg/kg	800	3300
YTI	Sample 2	western property boundary	1	1/24/2022	mg/kg	900	3600
YTI	Sample 3	western property boundary	1	1/24/2022	mg/kg	260	1900
YTI	Sample 4	west crane track	1	12/22/2021	mg/kg	<1000	<1000
Pasha Wharf	Sample 5	Vault 127	1	12/22/2021	mg/kg	<2200	<2200
Pasha Wharf	Sample 6	Vault 110	1	12/22/2021	mg/kg	<2500	<2500
Pasha Wharf	Sample 7	Vault 109	1	12/22/2021	mg/kg	<2200	<2200
Pasha Wharf	Sample 8	Vault 91	1	12/22/2021	mg/kg	<2300	<2300
Pasha Wharf	Sample 9	Vault 70	1	12/22/2021	mg/kg	<2400	<2400
Pasha Wharf	Sample 10	Vault 80	1	12/22/2021	mg/kg	<2000	<2000
YTI	Sample 11	east crane track	1	12/22/2021	mg/kg	<2200	<2200
YTI	Sample 12	west water conveyance system trench	1	2/4/2022	mg/kg	<260	910
YTI	Sample 13	east water conveyance system trench	1	2/4/2022	mg/kg	<280	330
YTI	Sample 14	on top of wall between SA and YTI property boundary	n/a	2/14/2022	mg/kg	<100	240
YTI	Sample 15	South K-rails	1	3/8/2022	mg/kg	1100	2400
YTI	Sample 16	northeast K-rails	1	3/8/2022	mg/kg	920	1800
YTI	Sample 17	northeast K-rails	1	3/8/2022	mg/kg	830	1600
YTI	Sample 18	northeast K-rails	1	3/8/2022	mg/kg	590	1000
Pasha Wharf	Sample 19	Pasha wharf vaults	1 to 3	3/14/2022	mg/kg	590	670
Pasha Wharf	Sample 20	Pasha wharf vaults	1 to 3	3/14/2022	mg/kg	730	1000
Pasha Wharf	Sample 21	Pasha wharf vaults	1 to 3	3/14/2022	mg/kg	640	890
Pasha Wharf	Sample 22	Pasha wharf vaults	1 to 3	3/14/2022	mg/kg	1200	2200
Pasha Wharf	Sample 23	Pasha wharf vaults	1 to 3	3/15/2022	mg/kg	<400	1600
Pasha Wharf	Sample 24	Pasha wharf vaults	1 to 3	3/15/2022	mg/kg	<400	1200
Pasha Wharf	Sample 25	Pasha wharf vaults	1 to 3	3/15/2022	mg/kg	<400	1100
Pasha Wharf	Sample 26	Pasha wharf vaults	1 to 3	3/15/2022	mg/kg	<400	2400
Pasha Wharf	Sample 27	Pasha wharf vaults	1 to 3	3/15/2022	mg/kg	560	3400
Pasha Wharf	Sample 28	Pasha wharf vaults	1 to 3	3/15/2022	mg/kg	<400	790
Pasha Wharf	Sample 29	Pasha wharf vaults	1 to 3	3/15/2022	mg/kg	<400	590
Pasha Wharf	Sample 30	Pasha wharf vaults	1 to 3	3/15/2022	mg/kg	<400	1800
Pasha Wharf	Sample 31	Pasha wharf vaults	1 to 3	3/16/2022	mg/kg	1000	860
Pasha Wharf	Sample 32	Pasha wharf vaults	1 to 3	3/16/2022	mg/kg	1400	1600
Pasha Wharf	Sample 33	Pasha wharf vaults	1 to 3	3/16/2022	mg/kg	890	790

Table 4: Analytical Results for TPH
SA Recycling Facility
901 New Dock Street, Terminal Island, CA

General Location	Sample Identification	Location Description	Depth (feet bgs)	Date Collected	Units	TPH C10-C28 (DRO)	TPH C20-C38 (ORO)
Pasha Wharf	Sample 34	Pasha wharf vaults	1 to 3	3/16/2022	mg/kg	2000	3300
Pasha Wharf	Sample 35	Pasha wharf vaults	1 to 3	3/16/2022	mg/kg	840	820
Pasha Wharf	Sample 36	Pasha wharf vaults	1 to 3	3/16/2022	mg/kg	<200	<200

Note:
1. Soil samples were collected by GSI and were analyzed by Advanced Technology Laboratories (ATL).

Abbreviations:
TPH = total petroleum hydrocarbons
DRO = diesel range organics
ORO = motor oil range organics
bgs = below ground surface
mg/kg = milligrams per kilogram
GSI = GSI Environmental Inc.
Pasha = Pasha Stevedoring & Terminals LP; 1001 New Dock Street
YTI = Yusen Terminals, LLC; 701 New Dock Street

GSI ENVIRONMENTAL

Table 5: Analytical Results for Phthalates
SA Recycling Facility
901 New Dock Street, Terminal Island, CA

General Location	Sample Identification	Location Description	Depth (feet bgs)	Date Collected	Units	bis(2-ethylhexyl)phthalate	Butylbenzylphthalate	Di-nbutylphthalate	Di-n-octylphthalate	Diethyl phthalate	Dimethyl phthalate
YTI	PT02-A	east crane track	1	12/22/2021	µg/kg	<160000	<160000	<160000	<160000	<160000	<160000
YTI	Sample 1	western property boundary	1	1/24/2022	µg/kg	<67000	<67000	<67000	<67000	<67000	<67000
YTI	Sample 2	western property boundary	1	1/24/2022	µg/kg	<70000	<70000	<70000	<70000	<70000	<70000
YTI	Sample 3	western property boundary	1	1/24/2022	µg/kg	<67000	<67000	<67000	<67000	<67000	<67000
Pasha Wharf	Sample 5	Vault 127	1	12/22/2021	µg/kg	<180000	<180000	<180000	<180000	<180000	<180000
YTI	Sample 12	west water conveyance system trench	1	2/4/2022	µg/kg	<210000	<210000	<210000	<210000	<210000	<210000
YTI	Sample 13	east water conveyance system trench	1	2/4/2022	µg/kg	<230000	<230000	<230000	<230000	<230000	<230000
YTI	Sample 14	on top of wall between SA and YTI property boundary	n/a	2/14/2022	µg/kg	<6600	<6600	<6600	<6600	<6600	<6600
YTI	Sample 15	South K-rails	1	3/8/2022	µg/kg	<36000	<36000	<36000	<36000	<36000	<36000
YTI	Sample 16	northeast K-rails	1	3/8/2022	µg/kg	<33000	<33000	<33000	<33000	<33000	<33000
YTI	Sample 17	northeast K-rails	1	3/8/2022	µg/kg	<33000	<33000	<33000	<33000	<33000	<33000
YTI	Sample 18	northeast K-rails	1	3/8/2022	µg/kg	<33000	<33000	<33000	<33000	<33000	<33000
Pasha Wharf	Sample 19	Pasha wharf vaults	1 to 3	3/14/2022	µg/kg	<22000	<22000	<22000	<22000	<22000	<22000
Pasha Wharf	Sample 20	Pasha wharf vaults	1 to 3	3/14/2022	µg/kg	<22000	<22000	<22000	<22000	<22000	<22000
Pasha Wharf	Sample 21	Pasha wharf vaults	1 to 3	3/14/2022	µg/kg	<22000	<22000	<22000	<22000	<22000	<22000
Pasha Wharf	Sample 22	Pasha wharf vaults	1 to 3	3/14/2022	µg/kg	<23000	<23000	<23000	<23000	<23000	<23000
Pasha Wharf	Sample 23	Pasha wharf vaults	1 to 3	3/15/2022	µg/kg	<35000	<35000	<35000	<35000	<35000	<35000

GSI ENVIRONMENTAL

Table 5: Analytical Results for Phthalates
SA Recycling Facility
901 New Dock Street, Terminal Island, CA

General Location	Sample Identification	Location Description	Depth (feet bgs)	Date Collected	Units	bis(2-ethylhexyl)phthalate	Butylbenzylphthalate	Di-nbutylphthalate	Di-n-octylphthalate	Diethyl phthalate	Dimethyl phthalate
Pasha Wharf	Sample 24	Pasha wharf vaults	1 to 3	3/15/2022	µg/kg	<33000	<33000	<33000	<33000	<33000	<33000
Pasha Wharf	Sample 25	Pasha wharf vaults	1 to 3	3/15/2022	µg/kg	<34000	<34000	<34000	<34000	<34000	<34000
Pasha Wharf	Sample 26	Pasha wharf vaults	1 to 3	3/15/2022	µg/kg	<34000	<34000	<34000	<34000	<34000	<34000
Pasha Wharf	Sample 27	Pasha wharf vaults	1 to 3	3/15/2022	µg/kg	<35000	<35000	<35000	<35000	<35000	<35000
Pasha Wharf	Sample 28	Pasha wharf vaults	1 to 3	3/15/2022	µg/kg	<45000	<45000	<45000	<45000	<45000	<45000
Pasha Wharf	Sample 29	Pasha wharf vaults	1 to 3	3/15/2022	µg/kg	<33000	<33000	<33000	<33000	<33000	<33000
Pasha Wharf	Sample 30	Pasha wharf vaults	1 to 3	3/15/2022	µg/kg	57000	<33000	<33000	<33000	<33000	<33000
Pasha Wharf	Sample 31	Pasha wharf vaults	1 to 3	3/16/2022	µg/kg	41000	<33000	<33000	<33000	<33000	<33000
Pasha Wharf	Sample 32	Pasha wharf vaults	1 to 3	3/16/2022	µg/kg	<34000	<34000	<34000	<34000	<34000	<34000
Pasha Wharf	Sample 33	Pasha wharf vaults	1 to 3	3/16/2022	µg/kg	<50000	<50000	<50000	<50000	<50000	<50000
Pasha Wharf	Sample 34	Pasha wharf vaults	1 to 3	3/16/2022	µg/kg	<34000	<34000	<34000	<34000	<34000	<34000
Pasha Wharf	Sample 35	Pasha wharf vaults	1 to 3	3/16/2022	µg/kg	<7100	<7100	<7100	<7100	<7100	<7100
Pasha Wharf	Sample 36	Pasha wharf vaults	1 to 3	3/16/2022	µg/kg	<34000	<34000	<34000	<34000	<34000	<34000

Note:
1. Soil samples were collected by GSI and were analyzed by Advanced Technology Laboratories (ATL).

Abbreviations:
SVOC = semi volatile organic compound
GSI = GSI Environmental Inc.
bgs = below ground surface
mg/kg = milligrams per kilogram
Pasha = Pasha Stevedoring & Terminals LP; 1001 New Dock Street
YTI = Yusen Terminals, LLC; 701 New Dock Street

GSI ENVIRONMENTAL

Table 6: Analytical Results for PAHs
SA Recycling Facility
901 New Dock Street, Terminal Island, CA

General Location	Sample Identification	Location Description	Depth (feet bgs)	Date Collected	Units	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	Naphthalene	Phenanthrene	Pyrene
YTI	PT02-A	east crane track	1	12/22/2021	µg/kg	not yet reported by laboratory															
YTI	Sample 1	western property boundary	1	1/24/2022	µg/kg	<67000	<67000	<67000	<67000	<67000	<67000	<67000	<67000	<67000	<67000	<67000	<67000	<67000	<67000	<67000	<67000
YTI	Sample 2	western property boundary	1	1/24/2022	µg/kg	<70000	<70000	<70000	<70000	<70000	<70000	<70000	<70000	<70000	<70000	<70000	<70000	<70000	<70000	<70000	<70000
YTI	Sample 3	western property boundary	1	1/24/2022	µg/kg	<67000	<67000	<67000	<67000	<67000	<67000	<67000	<67000	<67000	<67000	<67000	<67000	<67000	<67000	<67000	<67000
Pasha Wharf	Sample 5	Vault 127	1	12/22/2021	µg/kg	not yet reported by laboratory															
YTI	Sample 12	west water conveyance system trench	1	2/4/2022	µg/kg	<210000	<210000	<210000	<210000	<210000	<210000	<210000	<210000	<210000	<210000	<210000	<210000	<210000	<210000	<210000	<210000
YTI	Sample 13	east water conveyance system trench	1	2/4/2022	µg/kg	<230000	<230000	<230000	<230000	<230000	<230000	<230000	<230000	<230000	<230000	<230000	<230000	<230000	<230000	<230000	<230000
YTI	Sample 14	on top of wall between SA and YTI property boundary	n/a	2/14/2022	µg/kg	<6600	<6600	<6600	<6600	<6600	<6600	<6600	<6600	<6600	<6600	<6600	<6600	<6600	<6600	<6600	<6600
YTI	Sample 15	South K-rails	1	3/8/2022	µg/kg	<36000	<36000	<36000	<36000	<36000	<36000	<36000	<36000	<36000	<36000	<36000	<36000	<36000	<36000	<36000	<36000
YTI	Sample 16	northeast K-rails	1	3/8/2022	µg/kg	<33000	<33000	<33000	<33000	<33000	<33000	<33000	<33000	<33000	<33000	<33000	<33000	<33000	<33000	<33000	<33000
YTI	Sample 17	northeast K-rails	1	3/8/2022	µg/kg	<33000	<33000	<33000	<33000	<33000	<33000	<33000	<33000	<33000	<33000	<33000	<33000	<33000	<33000	<33000	<33000
YTI	Sample 18	northeast K-rails	1	3/8/2022	µg/kg	<33000	<33000	<33000	<33000	<33000	<33000	<33000	<33000	<33000	<33000	<33000	<33000	<33000	<33000	<33000	<33000
Pasha Wharf	Sample 19	Pasha wharf vaults	1 to 3	3/14/2022	µg/kg	<22000	<22000	<22000	<22000	<22000	<22000	<22000	<22000	<22000	<22000	<22000	<22000	<22000	<22000	<22000	<22000
Pasha Wharf	Sample 20	Pasha wharf vaults	1 to 3	3/14/2022	µg/kg	<22000	<22000	<22000	<22000	<22000	<22000	<22000	<22000	<22000	<22000	<22000	<22000	<22000	<22000	<22000	<22000
Pasha Wharf	Sample 21	Pasha wharf vaults	1 to 3	3/14/2022	µg/kg	<22000	<22000	<22000	<22000	<22000	<22000	<22000	<22000	<22000	<22000	<22000	<22000	<22000	<22000	<22000	<22000
Pasha Wharf	Sample 22	Pasha wharf vaults	1 to 3	3/14/2022	µg/kg	<23000	<23000	<23000	<23000	<23000	<23000	<23000	<23000	<23000	<23000	<23000	<23000	<23000	<23000	<23000	<23000
Pasha Wharf	Sample 23	Pasha wharf vaults	1 to 3	3/15/2022	µg/kg	<35000	<35000	<35000	<35000	<35000	<35000	<35000	<35000	<35000	<35000	<35000	<35000	<35000	<35000	<35000	<35000
Pasha Wharf	Sample 24	Pasha wharf vaults	1 to 3	3/15/2022	µg/kg	<33000	<33000	<33000	<33000	<33000	<33000	<33000	<33000	<33000	<33000	<33000	<33000	<33000	<33000	<33000	<33000
Pasha Wharf	Sample 25	Pasha wharf vaults	1 to 3	3/15/2022	µg/kg	<34000	<34000	<34000	<34000	<34000	<34000	<34000	<34000	<34000	<34000	<34000	<34000	<34000	<34000	<34000	<34000
Pasha Wharf	Sample 26	Pasha wharf vaults	1 to 3	3/15/2022	µg/kg	<34000	<34000	<34000	<34000	<34000	<34000	<34000	<34000	<34000	<34000	<34000	<34000	<34000	<34000	<34000	<34000
Pasha Wharf	Sample 27	Pasha wharf vaults	1 to 3	3/15/2022	µg/kg	<35000	<35000	<35000	<35000	<35000	<35000	<35000	<35000	<35000	<35000	<35000	<35000	<35000	<35000	<35000	<35000
Pasha Wharf	Sample 28	Pasha wharf vaults	1 to 3	3/15/2022	µg/kg	<45000	<45000	<45000	<45000	<45000	<45000	<45000	<45000	<45000	<45000	<45000	<45000	<45000	<45000	<45000	<45000
Pasha Wharf	Sample 29	Pasha wharf vaults	1 to 3	3/15/2022	µg/kg	<33000	<33000	<33000	<33000	<33000	<33000	<33000	<33000	<33000	<33000	<33000	<33000	<33000	<33000	<33000	<33000
Pasha Wharf	Sample 30	Pasha wharf vaults	1 to 3	3/15/2022	µg/kg	<33000	<33000	<33000	<33000	<33000	<33000	<33000	<33000	<33000	<33000	<33000	<33000	<33000	<33000	<33000	<33000
Pasha Wharf	Sample 31	Pasha wharf vaults	1 to 3	3/16/2022	µg/kg	<33000	<33000	<33000	<33000	<33000	<33000	<33000	<33000	<33000	<33000	<33000	<33000	<33000	<33000	<33000	<33000
Pasha Wharf	Sample 32	Pasha wharf vaults	1 to 3	3/16/2022	µg/kg	<34000	<34000	<34000	<34000	<34000	<34000	<34000	<34000	<34000	<34000	35000	<34000	<34000	<34000	<34000	<34000
Pasha Wharf	Sample 33	Pasha wharf vaults	1 to 3	3/16/2022	µg/kg	<50000	<50000	<50000	<50000	<50000	<50000	<50000	<50000	<50000	<50000	<50000	<50000	<50000	<50000	<50000	<50000
Pasha Wharf	Sample 34	Pasha wharf vaults	1 to 3	3/16/2022	µg/kg	<34000	<34000	<34000	<34000	<34000	<34000	<34000	<34000	<34000	<34000	<34000	<34000	<34000	<34000	<34000	<34000
Pasha Wharf	Sample 35	Pasha wharf vaults	1 to 3	3/16/2022	µg/kg	<7100	<7100	<7100	<7100	<7100	<7100	<7100	<7100	<7100	<7100	<7100	<7100	<7100	<7100	<7100	<7100
Pasha Wharf	Sample 36	Pasha wharf vaults	1 to 3	3/16/2022	µg/kg	<34000	<34000	<34000	<34000	<34000	<34000	<34000	<34000	<34000	<34000	<34000	<34000	<34000	<34000	<34000	<34000

Note:
1. Soil samples were collected by GSI and were analyzed by Advanced Technology Laboratories (ATL).

Abbreviations:
SVOC = semi volatile organic compound
GSI = GSI Environmental Inc.
bgs = below ground surface
mg/kg = milligrams per kilogram
Pasha = Pasha Stevedoring & Terminals LP; 1001 New Dock Street
YTI = Yusen Terminals, LLC; 701 New Dock Street

Table 7: Particle Size Distribution
SA Recycling Facility
901 New Dock Street, Terminal Island, CA

General Location	Sample Identification	Location Description	Depth (feet bgs)	Date Collected	Wentworth Scale Grain Size	Medium Grain Size (mm)	Component Percentage								
								Sand Size							
							Gravel	Very Coarse	Coarse	Medium	Fine	Very Fine	Silt	Clay	Silt and Clay
YTI	PT02-A	east crane track	1	12/22/2021	Silt	0.0571	0.00	0.00	2.24	6.02	13.38	24.72	50.26	3.28	53.63
YTI	Sample 2	western property boundary	1	1/24/2022	Fine Grain Sand	0.1700	0	3.41	14.98	19.97	20.86	18.5	21.43	0.85	22.28
YTI	Sample 3	western property boundary	1	1/24/2022	Very Fine Grain Sand	0.1170	0	0.78	7.20	16.04	23.38	24	27.25	1.35	28.6
Pasha Wharf	Sample 5	Vault 127	1	12/22/2021	Fine Grain Sand	0.1869	8.11	4.52	13.72	16.62	16.45	13.82	23.99	2.77	26.76
YTI	Sample 12	west water conveyance system trench	1	2/4/2022	Very Fine Grain Sand	0.1082	0	1	6.65	15.37	21.99	21.9	31.13	1.96	33.09
YTI	Sample 13	east water conveyance system trench	1	2/4/2022	Very Fine Grain Sand	0.0693	0	0.97	4.6	8.99	15.47	23.53	43.69	2.74	46.44
YTI	Sample 14	on top of wall between SA and YTI property boundary	n/a	2/14/2022	Silt	0.0562	0	0.13	4.61	9.36	12.83	19.49	50.55	3.02	53.57
Pasha Wharf	Sample 19	Pasha wharf vaults	1 to 3	3/14/2022	Fine Grain Sand	0.2095	0	4.21	11.38	26.24	30.52	17.04	9.95	0.66	10.62
Pasha Wharf	Sample 28	Pasha wharf vaults	1 to 3	3/15/2022	Medium Grain Sand	0.2776	0	9.3	20.02	24.22	21.6	12.01	11.99	0.83	12.82
Pasha Wharf	Sample 36	Pasha wharf vaults	1 to 3	3/16/2022	Medium Grain Sand	0.2951	0	5.06	21.66	30.65	24.74	9.97	7.3	0.62	7.92

Note:
1. Soil samples were collected by GSI and were analyzed by Core Lab.

Abbreviation:
bgs = below ground surface
mm = milimeter
GSI = GSI Environmental Inc.
Pasha = Pasha Stevedoring & Terminals LP; 1001 New Dock Street
YTI = Yusen Terminals, LLC; 701 New Dock Street

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Table 8: Analytical Results for Dioxins and Dibenzofurans

SA Recycling Facility

901 New Dock Street, Terminal Island, CA

General Location	Sample Identification	Location Description	Depth (feet bgs)	Date Collected	Units	2,3,7,8-TCDD	12378-PeCDD	123478-HxCDD	123678-HxCDD	123789-HxCDD	1234678-HpCDD	OCDD	2,3,7,8-TCDF	12378-PeCDF	23478-PeCDF	123478-HxCDF	123678-HxCDF	234678-HxCDF	123789-HxCDF	1234678-HpCDF	1234789-HpCDF	OCDF	Total TCDD	Total PeCDD	Total HxCDD	Total HpCDD	Total TCDF	Total PeCDF	Total HxCDF	Total HpCDF
YTI	PT02-A	east crane track	1	12/22/2021	pg/g	1.65	18.5	19.2	63.2	41.8	1390	10300 E	48.2	70.9	51.7	67.7	99.3	116	44.1	430	72.0	693	50.6	160	666	2950	874	1570	436	906
YTI	Sample 2	western property boundary	1	1/24/2022	pg/g	1.62	13	9.98	32.9	29.4	913	7200 E	24.3	13.8	30.4	28.1	30.6	53.2	14	239	22.9	390	67.3	130	423	2250	427	893	624	482
YTI	Sample 3	western property boundary	1	1/24/2022	pg/g	2.29	17.5	20	120	46.6	6550 E	59100 E	29.8	35.6	33.6	88.6	69.3	84.6	55.4	849	111	1060	69.8	226	1760	33300	603	1350	1890	2810
Pasha Wharf	Sample 5	Vault 127	1	12/22/2021	pg/g	0.511	5.96	12.4	34.0	16.4	1730	8840 E	4.44	4.08	4.84	8.12	6.62	9.05	4.02	84.6	4.41	193	6.99	64.2	1200	9.34	70.1	114	188	230
YTI	Sample 12	west water conveyance system trench	1	2/4/2022	pg/g	1.97 J	16.6 J	15.2 J	57.6 J	36.9 J	1,200 J	9,610 J, E	50.2 J	33.9 J	36.6 J	50.6 J	49.9 J	43.7 J	18 J	310 J	31.6 J	493 J	65.3 J	199 J	690 J	2,800 J	640 J	727 J	689 J	621 J
YTI	Sample 13	east water conveyance system trench	1	2/4/2022	pg/g	6.04 J	45.8 J	38 J	120 J	73.6 J	2,180 J, E	17,200 J, E	198 J	78.6 J	145 J	153 J	133 J	146 J	44.5 J	658 J	58.3 J	769 J	241 J	561 J	1,380 J	4,860 J	2,420 J	2,010 J	1,530 J	1,200 J
YTI	Sample 14	on top of wall between SA and YTI property boundary	n/a	2/14/2022	pg/g	1.01	7.35	7.39	25.2	19.2	717	6340	26	13.4	27.4	35.8	44.3	53.0	29.9	193	24.4	305	35.8	82.5	323	1420	726	1870	1310	422

Notes:

1. Soil samples were collected by GSI and were analyzed by Advanced Technology Laboratories (ATL).
2. Laboratory reports for additional dioxin results are pending.

Abbreviations:

pg/g = picograms per gram
bgs = below ground surface
GSI = GSI Environmental Inc.
Pasha = Pasha Stevedoring & Terminals LP; 1001 New Dock Street
YTI = Yusen Terminals, LLC; 701 New Dock Street

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Table 9: Polybrominated Diphenyl Ethers
SA Recycling Facility
901 New Dock Street, Terminal Island, CA

General Location	Sample Identification	Location Description	Depth (feet bgs)	Date Collected	Units	PBDE-100	PBDE-138	PBDE-153	PBDE-154	PBDE-17	PBDE-28	PBDE-47	PBDE-49	PBDE-85	PBDE-99
YTI	PT02-A	east crane track	1	12/22/2021	µg/kg	850	<110	140	<110	<110	<110	490	<110	<110	160
YTI	Sample 2	western property boundary	1	1/24/2022	µg/kg	780	<200	<200	<200	<200	<200	460	<200	<200	<200
YTI	Sample 3	western property boundary	1	1/24/2022	µg/kg	2100	<190	280	<190	<190	<190	1200	<190	<190	420
Pasha Wharf	Sample 5	Vault 127	1	12/22/2021	µg/kg	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100
YTI	Sample 12	west water conveyance system trench	1	2/4/2022	µg/kg	660 J	<430 J	<430 J	<430 J	<430 J	<430 J	<430 J	<430 J	<430 J	<430 J
YTI	Sample 13	east water conveyance system trench	1	2/4/2022	µg/kg	<460 J	<460 J	<460 J	<460 J	<460 J	<460 J	<460 J	<460 J	<460 J	<460 J
YTI	Sample 14	on top of wall between SA and YTI property boundary	n/a	2/14/2022	µg/kg	1300	<100	220	140	<100	<100	860 J	<100	<100	270

Notes:
1. Soil samples were collected by GSI and were analyzed by Advanced Technology Laboratories (ATL).
2. Laboratory reports for additional PBDE results are pending.

Abbreviations:
µg/kg = microgram per kilogram
bgs = below ground surface
GSI = GSI Environmental Inc.
Pasha = Pasha Stevedoring & Terminals LP; 1001 New Dock Street
YTI = Yusen Terminals, LLC; 701 New Dock Street

GSI ENVIRONMENTAL

Table 10: Analytical Results for Soil Waste
SA Recycling Facility
901 New Dock Street, Terminal Island, CA

Drum ID	Location Description	Date Collected	% Moisture (by Weight)	Units	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Hexavalent Chromium	Lead	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
TTLC Results																						
Drum 1	YTI	10/26/2021	98	mg/kg	<2.0	5.6	350	<1.0	6.4	100	13	220	na	340	0.56	16	77	<1.0	<1.0	<1.0	44	4700
Drum 2	YTI	10/26/2021	99	mg/kg	<2.0	4.5	180	<1.0	2.6	87	7.4	120	na	340	0.44	6.7	40	<1.0	<1.0	<1.0	33	1500
D1	YTI	12/22/2021	12	mg/kg	6.8	12	820	< 1.1	31	230	30	530	15	1,300	2.8	31	220	< 5.6	5.1	< 1.1	81	8,300
D2	YTI	12/22/2021	17	mg/kg	8.2	13	770	< 1.2	29	230	29	580	9.7	1,300	2.4	29	220	< 1.2	4.2	< 1.2	83	9,000
D3	YTI	12/22/2021	69	mg/kg	19	14	760	< 1.7	41	200	26	650	12	1,500	3.7	27	180	< 1.7	4.3	< 1.7	100	10,000
D4	YTI	12/22/2021	55	mg/kg	13	16	1000	< 1.5	44	230	32	730	20	1,600	2.1	26	220	< 1.5	3.8	< 1.5	100	9,300
D5	YTI	12/22/2021	18	mg/kg	2.7	4.1	260	< 1.2	5.9	76	10	170	4.1	310	0.28	8.2	60	< 1.2	< 1.2	< 1.2	44	2,500
D6	YTI	12/22/2021	38	mg/kg	22	15	1100	< 1.4	26	240	25	810	32	1,400	1.7	32	230	< 1.4	3.7	< 1.4	87	9,900
D7	YTI	12/22/2021	64	mg/kg	9.4	15	780	< 3.3	26	230	29	720	14	1,300	3.1	34	200	< 1.6	4.1	< 1.6	91	10,000
D8	YTI	12/22/2021	29	mg/kg	< 2.6	8.1	250	< 2.6	5.6	72	13	160	5.7	280	0.32	5.5	52	< 1.3	< 1.3	< 1.3	56	2,000
D9	YTI	12/22/2021	65	mg/kg	< 3.3	11	280	< 1.7	6.1	82	16	170	22	270	1.1	6.5	61	< 1.7	< 1.7	< 1.7	75	1,600
D10	YTI	12/22/2021	63	mg/kg	13	15	630	< 1.6	24	170	23	570	11	1,200	2.8	29	150	< 1.6	3	< 1.6	89	9,500
D11	YTI	12/22/2021	64	mg/kg	< 3.3	11	500	< 1.6	23	140	22	430	9.9	780	2.1	18	120	< 1.6	1.7	< 1.6	83	7,400
D12	YTI	12/22/2021	49	mg/kg	< 3.0	13	380	< 1.5	9.2	100	18	250	6.8	470	1.1	11	80	< 1.5	< 1.5	< 1.5	75	3,100
D13	Pasha Wharf	12/22/2021	22	mg/kg	< 2.4	12	230	< 1.2	5.9	140	10	520	69	920	1.1	39	59	< 1.2	2.3	< 1.2	40	3,600
D14	Pasha Wharf	12/22/2021	55	mg/kg	< 3.1	6.9	520	< 1.6	8.6	420	15	190	34	2,000	1.1	15	66	< 1.6	< 1.6	< 1.6	49	4,400
D15	Pasha Wharf	12/22/2021	31	mg/kg	< 2.6	3.1	150	< 1.3	1.6	46	4.6	63	6.5	86	< 0.13	6.5	24	< 1.3	< 1.3	< 1.3	24	1,400
D22	Pasha Wharf	12/23/2021	38	mg/kg	< 2.8	3.5	210	< 1.4	2.9	69	9.1	130	30	160	0.28	8.6	39	< 1.4	< 1.4	< 1.4	36	2,200
D23	Pasha Wharf	12/23/2021	38	mg/kg	< 2.8	6.5	180	< 1.4	4.6	110	9.5	230	13	530	0.48	12	50	< 1.4	< 1.4	< 1.4	52	3,500
D24	YTI	12/22/2021	37	mg/kg	4.0	14	790	< 1.4	30	230	29	670	15	1,400	2.5	33	200	< 1.4	5.1	< 1.4	85	11,000
D26	YTI	12/28/2021	33	mg/kg	< 2.7	12	910	< 1.3	28	250	30	560	17	1,300	2.0	33	240	< 1.3	4.2	< 1.3	80	11,000
D27	YTI	12/28/2021	62	mg/kg	< 3.2	13	790	< 1.6	20	280	29	480	19	1,000	1.7	36	220	< 1.6	3.0	< 1.6	81	8,800
D28	YTI	12/28/2021	56	mg/kg	< 3.1	11	950	< 1.6	30	280	31	590	19	1,300	1.0	27	240	< 1.6	4.0	< 1.6	81	9,900
D29	YTI	12/28/2021	52	mg/kg	6.0	9.3	700	< 1.5	17	230	23	370	13	700	1.9	32	180	< 1.5	2.5	< 1.5	71	6,700
D30	YTI	12/28/2021	51	mg/kg	< 3.0	9.3	580	< 1.5	14	200	22	370	11	740	1.4	26	160	< 1.5	1.9	< 1.5	73	8,200
D32	YTI	12/28/2021	87	mg/kg	< 3.7	13	330	< 1.9	7.5	120	20	210	7.3	300	0.85	10	88	8.2	< 1.9	< 1.9	100	2,600
D33	YTI	12/28/2021	66	mg/kg	< 3.3	11	300	< 1.7	7.4	110	18	190	4.1	310	0.69	11	85	4.8	< 1.7	< 1.7	88	2,700
D34	YTI	12/28/2021	42	mg/kg	< 2.8	11	180	< 1.4	3.3	61	13	69	< 1.4	100	0.30	3.8	42	5.1	< 1.4	< 1.4	72	760
D35	YTI	12/28/2021	32	mg/kg	< 2.6	11	180	< 1.3	2.5	60	14	55	1.8	75	0.34	4.2	42	3.7	< 1.3	< 1.3	79	440
D36	YTI	12/29/2021	78	mg/kg	< 3.6	10	560	< 1.8	18	230	24	340	26.0	820	0.85	29	170	6.7	< 1.8	< 1.8	84	7,000
D37	YTI	12/29/2021	66	mg/kg	< 3.3	9.7	490	< 1.7	17	190	23	290	25.0	1,200	0.7	21	140	7.2	< 1.7	< 1.7	87	5,000
D38	YTI	12/29/2021	38	mg/kg	< 2.8	8.3	370	< 1.4	11	160	17	240	23.0	670	0.91	17	110	4.1	< 1.4	< 1.4	63	4,200
D39	YTI	12/29/2021	58	mg/kg	< 3.2	10	610	< 1.6	16	220	22	350	11.0	690	1.3	25	160	3.8	< 1.6	< 1.6	83	5,800
D40	YTI	12/29/2021	100	mg/kg	< 4.1	12	630	< 2.0	22	310	29	440	11.0	950	1.8	36	220	7.8	< 2.0	< 2.0	94	7,900
D41	YTI	12/29/2021	25	mg/kg	< 2.5	9.3	450	< 1.2	13	220	21	390	8.4	610	0.83	25	180	6.0	< 1.2	< 1.2	71	4,900
D42	YTI	12/29/2021	42	mg/kg	< 2.8	13	230	< 1.4	3.6	79	16	97	4.3	160	0.51	5.9	55	5.9	< 1.4	< 1.4	87	930

GSI ENVIRONMENTAL

Table 10: Analytical Results for Soil Waste
SA Recycling Facility
901 New Dock Street, Terminal Island, CA

Drum ID	Location Description	Date Collected	% Moisture (by Weight)	Units	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Hexavalent Chromium	Lead	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
STLC Results																						
Drum 1	YTI	10/26/2021	--	mg/L	<0.50	<0.25	5.1	<0.25	0.35	1.2	0.38	3.1	na	17	<0.20	<0.25	1.6	<0.25	<0.25	<0.25	1.1	290
Drum 2	YTI	10/26/2021	--	mg/L	<0.50	<0.25	2.2	<0.25	<0.25	0.97	<0.25	1.3	na	11	<0.20	<0.25	1.1	<0.25	<0.25	<0.25	1.1	130
D1	YTI	12/22/2021	--	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
D2	YTI	12/22/2021	--	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
D3	YTI	12/22/2021	--	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
D4	YTI	12/22/2021	--	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
D5	YTI	12/22/2021	--	mg/L	--	--	--	--	--	0.27	--	--	--	3.4	--	--	--	--	--	--	--	29
D6	YTI	12/22/2021	--	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
D7	YTI	12/22/2021	--	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
D8	YTI	12/22/2021	--	mg/L	--	--	--	--	--	0.38	--	--	--	6.2	--	--	--	--	--	--	--	
D9	YTI	12/22/2021	--	mg/L	--	--	--	--	--	1.3	--	--	--	30	--	--	--	--	--	--	--	--
D10	YTI	12/22/2021	--	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
D11	YTI	12/22/2021	--	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
D12	YTI	12/22/2021	--	mg/L	--	--	--	--	--	1.1	--	14	--	24	--	--	--	--	--	--	--	310
D13	Pasha Wharf	12/22/2021	--	mg/L	--	--	--	--	--	2.2	--	88	0.44	42	--	--	--	--	--	--	--	250
D14	Pasha Wharf	12/22/2021	--	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
D15	Pasha Wharf	12/22/2021	--	mg/L	--	--	--	--	--	--	--	--	--	3.6	--	--	--	--	--	--	--	--
D22	Pasha Wharf	12/23/2021	--	mg/L	--	--	--	--	--	< 0.25	--	--	--	3.3	--	--	--	--	--	--	--	--
D23	Pasha Wharf	12/23/2021	--	mg/L	--	--	--	--	--	< 0.25	--	--	--	4.9	--	--	--	--	--	--	--	93
D24	YTI	12/22/2021	--	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
D26	YTI	12/28/2021	--	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
D27	YTI	12/28/2021	--	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
D28	YTI	12/28/2021	--	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
D29	YTI	12/28/2021	--	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
D30	YTI	12/28/2021	--	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
D32	YTI	12/28/2021	--	mg/L	--	--	--	--	--	0.57	--	--	--	6.2	--	--	--	--	--	--	--	100
D33	YTI	12/28/2021	--	mg/L	--	--	--	--	--	0.70	--	--	--	8.7	--	--	--	--	--	--	--	130
D34	YTI	12/28/2021	--	mg/L	--	--	--	--	--	0.26	--	--	--	2.5	--	--	--	--	--	--	--	--
D35	YTI	12/28/2021	--	mg/L	--	--	--	--	--	0.32	--	--	--	3.9	--	--	--	--	--	--	--	--
D36	YTI	12/29/2021	--	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
D37	YTI	12/29/2021	--	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
D38	YTI	12/29/2021	--	mg/L	--	--	--	--	0.57	1.5	--	--	--	28	--	--	--	--	--	--	--	300
D39	YTI	12/29/2021	--	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
D40	YTI	12/29/2021	--	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
D41	YTI	12/29/2021	--	mg/L	--	--	--	--	0.48	1.3	--	12	--	22	--	--	--	--	--	--	--	270
D42	YTI	12/29/2021	--	mg/L	--	--	--	--	--	0.61	--	--	--	6.9	--	--	--	--	--	--	--	--

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Table 10: Analytical Results for Soil Waste
SA Recycling Facility
901 New Dock Street, Terminal Island, CA

Drum ID	Location Description	Date Collected	% Moisture (by Weight)	Units	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Hexavalent Chromium	Lead	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
TCLP Results																						
Drum 1	YTI	10/26/2021	--	mg/L	<0.10	<0.050	0.76	<0.050	0.052	<0.050	<0.050	0.20	na	0.053	<0.20	<0.050	0.091	<0.050	<0.050	<0.050	<0.050	48
Drum 2	YTI	10/26/2021	--	mg/L	<0.10	<0.050	0.40	<0.050	<0.050	<0.050	<0.050	0.16	na	0.076	<0.20	<0.050	0.12	<0.050	<0.050	<0.050	<0.050	43
D1	YTI	12/22/2021	--	mg/L	--	--	--	--	0.081	< 0.050	--	--	--	< 0.050	--	--	--	--	--	--	--	--
D2	YTI	12/22/2021	--	mg/L	--	--	--	--	0.073	< 0.050	--	--	--	< 0.050	--	--	--	--	--	--	--	--
D3	YTI	12/22/2021	--	mg/L	--	--	--	--	0.20	< 0.050	--	--	--	0.056	--	--	--	--	--	--	--	--
D4	YTI	12/22/2021	--	mg/L	--	--	--	--	0.10	< 0.050	--	--	--	0.051	--	--	--	--	--	--	--	--
D5	YTI	12/22/2021	--	mg/L	--	--	--	--	--	--	--	--	--	< 0.050	--	--	--	--	--	--	--	--
D6	YTI	12/22/2021	--	mg/L	--	--	--	--	0.079	< 0.050	--	--	--	0.058	--	--	--	--	--	--	--	--
D7	YTI	12/22/2021	--	mg/L	--	--	--	--	0.067	< 0.050	--	--	--	< 0.050	--	--	--	--	--	--	--	--
D8	YTI	12/22/2021	--	mg/L	--	--	--	--	--	--	--	--	--	< 0.050	--	--	--	--	--	--	--	--
D9	YTI	12/22/2021	--	mg/L	--	--	--	--	--	--	--	--	--	< 0.050	--	--	--	--	--	--	--	--
D10	YTI	12/22/2021	--	mg/L	--	--	--	--	0.075	< 0.050	--	--	--	< 0.050	--	--	--	--	--	--	--	--
D11	YTI	12/22/2021	--	mg/L	--	--	--	--	0.071	< 0.050	--	--	--	< 0.050	--	--	--	--	--	--	--	--
D12	YTI	12/22/2021	--	mg/L	--	--	--	--	--	< 0.050	--	--	--	< 0.050	--	--	--	--	--	--	--	--
D13	Pasha Wharf	12/22/2021	--	mg/L	--	--	--	--	--	< 0.050	--	--	--	0.17	--	--	--	--	--	--	--	--
D14	Pasha Wharf	12/22/2021	--	mg/L	--	--	--	--	--	< 0.050	--	--	--	0.054	--	--	--	--	--	--	--	--
D15	Pasha Wharf	12/22/2021	--	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
D22	Pasha Wharf	12/23/2021	--	mg/L	--	--	--	--	--	< 0.050	--	--	--	< 0.050	--	--	--	--	--	--	--	--
D23	Pasha Wharf	12/23/2021	--	mg/L	--	--	--	--	--	< 0.050	--	--	--	< 0.050	--	--	--	--	--	--	--	
D24	YTI	12/22/2021	--	mg/L	--	--	--	--	0.073	< 0.050	--	--	--	< 0.050	--	--	--	--	--	--	--	--
D26	YTI	12/28/2021	--	mg/L	--	--	--	--	0.12	< 0.050	--	--	--	0.073	--	--	--	--	--	--	--	--
D27	YTI	12/28/2021	--	mg/L	--	--	--	--	0.094	< 0.050	--	--	--	0.072	--	--	--	--	--	--	--	--
D28	YTI	12/28/2021	--	mg/L	--	--	--	--	0.078	< 0.050	--	--	--	0.052	--	--	--	--	--	--	--	--
D29	YTI	12/28/2021	--	mg/L	--	--	--	--	--	< 0.050	--	--	--	0.051	--	--	--	--	--	--	--	--
D30	YTI	12/28/2021	--	mg/L	--	--	--	--	--	< 0.050	--	--	--	< 0.050	--	--	--	--	--	--	--	--
D32	YTI	12/28/2021	--	mg/L	--	--	--	--	--	< 0.050	--	--	--	< 0.050	--	--	--	--	--	--	--	--
D33	YTI	12/28/2021	--	mg/L	--	--	--	--	--	< 0.050	--	--	--	< 0.050	--	--	--	--	--	--	--	--
D34	YTI	12/28/2021	--	mg/L	--	--	--	--	--	--	--	--	--	< 0.050	--	--	--	--	--	--	--	--
D35	YTI	12/28/2021	--	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
D36	YTI	12/29/2021	--	mg/L	--	--	--	--	--	< 0.050	--	--	--	< 0.050	--	--	--	--	--	--	--	--
D37	YTI	12/29/2021	--	mg/L	--	--	--	--	--	< 0.050	--	--	--	0.054	--	--	--	--	--	--	--	--
D38	YTI	12/29/2021	--	mg/L	--	--	--	--	--	< 0.050	--	--	--	0.064	--	--	--	--	--	--	--	--
D39	YTI	12/29/2021	--	mg/L	--	--	--	--	--	< 0.050	--	--	--	0.091	--	--	--	--	--	--	--	--
D40	YTI	12/29/2021	--	mg/L	--	--	--	--	0.097	< 0.050	--	--	--	0.088	--	--	--	--	--	--	--	--
D41	YTI	12/29/2021	--	mg/L	--	--	--	--	--	< 0.050	--	--	--	0.053	--	--	--	--	--	--	--	--
D42	YTI	12/29/2021	--	mg/L	--	--	--	--	--	--	--	--	--	< 0.050	--	--	--	--	--	--	--	--

GSI ENVIRONMENTAL

Table 10: Analytical Results for Soil Waste
SA Recycling Facility
901 New Dock Street, Terminal Island, CA

Drum ID	Location Description	Date Collected	Units	PCB-1016	PCB-1221	PCB-1232	PCB-1242	PCB-1248	PCB-1254	PCB-1260	Total PCBs GSI (calculated)
Drum 1	YTI	10/26/2021	µg/kg	<16	<16	<16	<16	<16	150	<16	150
Drum 2	YTI	10/26/2021	µg/kg	<81	<81	<81	<81	<81	110	<81	110
D1	YTI	12/22/2021	µg/kg	240	< 36	< 36	< 36	< 36	330	200	770
D2	YTI	12/22/2021	µg/kg	600	< 93	< 93	< 93	< 93	630	420	1,650
D3	YTI	12/22/2021	µg/kg	710	< 140	< 140	< 140	< 140	740	500	1,950
D4	YTI	12/22/2021	µg/kg	800	< 250	< 250	< 250	< 250	980	570	2,350
D5	YTI	12/22/2021	µg/kg	100	< 19	< 19	< 19	< 19	76	49	225
D6	YTI	12/22/2021	µg/kg	650	< 110	< 110	< 110	< 110	840	450	1,940
D7	YTI	12/22/2021	µg/kg	690	< 130	< 130	< 130	< 130	820	550	2,060
D8	YTI	12/22/2021	µg/kg	110	< 21	< 21	< 21	< 21	130	83	323
D9	YTI	12/22/2021	µg/kg	260	< 26	< 26	< 26	< 26	280	210	750
D10	YTI	12/22/2021	µg/kg	420	< 26	< 26	< 26	< 26	560	320	1,300
D11	YTI	12/22/2021	µg/kg	470	< 26	< 26	< 26	< 26	540	350	1,360
D12	YTI	12/22/2021	µg/kg	390	< 24	< 24	< 24	< 24	500	310	1,200
D13	Pasha Wharf	12/22/2021	µg/kg	220	< 39	< 39	< 39	< 39	380	440	1,040
D14	Pasha Wharf	12/22/2021	µg/kg	260	< 50	< 50	< 50	< 50	260	310	830
D15	Pasha Wharf	12/22/2021	µg/kg	< 21	< 21	< 21	< 21	< 21	75	170	245
D22	Pasha Wharf	12/23/2021	µg/kg	< 22	< 22	< 22	< 22	< 22	85	390	475
D23	Pasha Wharf	12/23/2021	µg/kg	< 110	< 110	< 110	< 110	< 110	360	490	850
D24	YTI	12/22/2021	µg/kg	680	< 44	< 44	< 44	< 44	830	480	1,990
D26	YTI	12/28/2021	µg/kg	< 110	< 110	< 110	< 110	< 110	< 110	< 110	ND
D27	YTI	12/28/2021	µg/kg	< 26	< 26	< 26	< 26	< 26	< 26	< 26	ND
D28	YTI	12/28/2021	µg/kg	< 50	< 50	< 50	< 50	< 50	< 50	< 50	ND
D29	YTI	12/28/2021	µg/kg	< 24	< 24	< 24	< 24	< 24	< 24	< 24	ND
D30	YTI	12/28/2021	µg/kg	< 48	< 48	< 48	< 48	< 48	< 48	< 48	ND
D32	YTI	12/28/2021	µg/kg	< 30	< 30	< 30	< 30	< 30	< 30	< 30	ND
D33	YTI	12/28/2021	µg/kg	< 27	< 27	< 27	< 27	< 27	< 27	< 27	ND
D34	YTI	12/28/2021	µg/kg	< 23	< 23	< 23	< 23	< 23	< 23	< 23	ND
D35	YTI	12/28/2021	µg/kg	< 110	< 110	< 110	< 110	< 110	< 110	< 110	ND
D36	YTI	12/29/2021	µg/kg	< 57	< 57	< 57	< 57	< 57	< 57	< 57	ND
D37	YTI	12/29/2021	µg/kg	< 53	< 53	< 53	< 53	< 53	< 53	< 53	ND
D38	YTI	12/29/2021	µg/kg	< 44	< 44	< 44	< 44	< 44	< 44	< 44	ND
D39	YTI	12/29/2021	µg/kg	< 50	< 50	< 50	< 50	< 50	< 50	< 50	ND
D40	YTI	12/29/2021	µg/kg	< 65	< 65	< 65	< 65	< 65	< 65	< 65	ND
D41	YTI	12/29/2021	µg/kg	< 100	< 100	< 100	< 100	< 100	< 100	< 100	ND
D42	YTI	12/29/2021	µg/kg	< 110	< 110	< 110	< 110	< 110	< 110	< 110	ND

Note:
1. Soil samples collected by GSI and analyzed by Advanced Technology Laboratories (ATL).

Abbreviations:
µg/kg = microgram per kilogram
mg/kg = milligrams per kilogram
mg/L = milligrams per liter
bgs = below ground surface
GSI = GSI Environmental Inc.
Pasha = Pasha Stevedoring & Terminals LP; 1001 New Dock Street
STLC = Soluble Threshold Limit Concentration
TCLP = Toxicity Characteristic Leaching Procedure
TTLC = Total Threshold Limit Concentration
YTI = Yusen Terminals, LLC; 701 New Dock Street

GSI ENVIRONMENTAL

Table 11: Analytical Results for Water Waste
SA Recycling Facility
901 New Dock Street, Terminal Island, CA

Drum ID	Location Description	Date Collected	Units	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Hexavalent Chromium	Lead	Mercury [2]	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
D16	Pasha Wharf	12/22/2021	mg/L	< 0.010	< 0.010	0.077	< 0.0030	< 0.0030	0.0054	0.0035	0.029	< 0.010	0.013	< 0.20	< 0.0050	0.0097	< 0.010	< 0.0030	< 0.015	0.0078	0.81
D17	Pasha Wharf	12/22/2021	mg/L	< 0.010	0.011	0.077	< 0.0030	< 0.0030	0.0034	< 0.0030	0.024	< 0.010	0.016	< 0.20	< 0.0050	0.01	< 0.010	< 0.0030	< 0.015	0.0065	0.99
D18	Pasha Wharf	12/22/2021	mg/L	< 0.010	0.014	0.29	< 0.0030	0.0066	0.064	0.013	0.45	< 0.010	0.49	0.57	0.006	0.061	< 0.010	< 0.0030	< 0.015	0.91	10
D19	Pasha Wharf	12/22/2021	mg/L	< 0.010	0.01	0.09	< 0.0030	< 0.0030	0.004	< 0.0030	0.052	< 0.010	0.023	< 0.20	< 0.0050	0.015	< 0.010	< 0.0030	< 0.015	0.0045	0.93
D20	Pasha Wharf	12/22/2021	mg/L	< 0.010	< 0.010	0.088	< 0.0030	< 0.0030	< 0.0030	< 0.0030	0.038	< 0.010	0.018	< 0.20	< 0.0050	0.014	< 0.010	< 0.0030	< 0.015	0.0035	0.61
D21	Pasha Wharf	12/22/2021	mg/L	< 0.010	< 0.010	0.091	< 0.0030	< 0.0030	0.0046	< 0.0030	0.045	< 0.010	0.025	< 0.20	< 0.0050	0.016	< 0.010	< 0.0030	< 0.015	0.0051	0.95
D31	YTI	12/28/2021	mg/L	<0.010	0.066	1.6	0.0063	0.035	0.35	0.10	1.2	<0.010	1.6	3.0	0.0071	0.34	<0.010	0.0034	<0.015	0.39	17

Drum ID	Location Description	Date Collected	Units	PCB-1016	PCB-1221	PCB-1232	PCB-1242	PCB-1248	PCB-1254	PCB-1260	Total PCBs GSI (calculated)
D16	Pasha Wharf	12/22/2021	ug/L	< 0.50	< 1.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	ND
D17	Pasha Wharf	12/22/2021	ug/L	< 0.50	< 1.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	ND
D18	Pasha Wharf	12/22/2021	ug/L	< 0.50	< 1.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	ND
D19	Pasha Wharf	12/22/2021	ug/L	< 0.50	< 1.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	ND
D20	Pasha Wharf	12/22/2021	ug/L	< 0.50	< 1.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	ND
D21	Pasha Wharf	12/22/2021	ug/L	< 0.50	< 1.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	ND
D31	YTI	12/28/2021	ug/L	<0.50	<1.0	<0.50	<0.50	<0.50	<0.50	<0.50	ND

Note:
1. Soil samples collected by GSI and analyzed by Advanced Technology Laboratories (ATL).

Abbreviations:
mg/kg = milligrams per kilogram
mg/L = milligrams per liter
ug/L = micrograms per liter
ND = not detected above laboratory reporting limits
GSI = GSI Environmental Inc.

Pasha = Pasha Stevedoring & Terminals LP; 1001 New Dock Street
YTI = Yusen Terminals, LLC; 701 New Dock Street

GSI ENVIRONMENTAL

Table 12: Drum and Waste Log

SA Recycling Facility

901 New Dock Street, Terminal Island, CA

Drum ID	Container Type (D, RO, O)	Matrix	Date Generated	Temporary Storage Location	Non-RCRA Hazardous (H)/ Non-Hazardous (NH)	Pickup Date	Receiving Facility	Manifest Number
D1	Drum	soil	10/23/2021	SATI - 901 New Dock St	H	10/29/2021	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	20428873
D2	Drum	soil	10/23/2021	SATI - 901 New Dock St	H	10/29/2021	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	20428873
Drum 1	Drum	soil	12/22/2021	SATI - 901 New Dock St	H	1/24/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	016575795 FLE
Drum 2	Drum	soil	12/22/2021	SATI - 901 New Dock St	H	1/25/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	016575795 FLE
Drum 3	Drum	soil	12/22/2021	SATI - 901 New Dock St	H	1/26/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	016575795 FLE
Drum 4	Drum	soil	12/22/2021	SATI - 901 New Dock St	H	1/27/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	016575795 FLE
Drum 5	Drum	soil	12/22/2021	SATI - 901 New Dock St	H	1/28/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	016575795 FLE
Drum 6	Drum	soil	12/22/2021	SATI - 901 New Dock St	H	1/29/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	016575795 FLE
Drum 7	Drum	soil	12/22/2021	SATI - 901 New Dock St	H	1/30/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	016575795 FLE
Drum 8	Drum	soil	12/22/2021	SATI - 901 New Dock St	H	1/31/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	016575795 FLE
Drum 9	Drum	soil	12/22/2021	SATI - 901 New Dock St	H	2/1/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	016575795 FLE
Drum 10	Drum	soil	12/22/2021	SATI - 901 New Dock St	H	2/2/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	016575795 FLE
Drum 11	Drum	soil	12/22/2021	SATI - 901 New Dock St	H	2/3/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	016575795 FLE
Drum 12	Drum	soil	12/22/2021	SATI - 901 New Dock St	H	2/4/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	016575795 FLE
Drum 13	Drum	soil	12/22/2021	SATI - 901 New Dock St	H	2/5/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	01657594 FLE
Drum 14	Drum	soil	12/22/2021	SATI - 901 New Dock St	H	2/6/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	01657594 FLE
Drum 15	Drum	soil	12/22/2021	SATI - 901 New Dock St	H	2/7/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	01657594 FLE
Drum 16	Drum	water	12/22/2021	SATI - 901 New Dock St	NH	2/8/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	122005
Drum 17	Drum	water	12/22/2021	SATI - 901 New Dock St	NH	2/9/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	122005
Drum 18	Drum	water	12/22/2021	SATI - 901 New Dock St	NH	2/10/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	122005
Drum 19	Drum	water	12/23/2021	SATI - 901 New Dock St	NH	2/11/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	122005
Drum 20	Drum	water	12/23/2021	SATI - 901 New Dock St	NH	2/12/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	122005
Drum 21	Drum	water	12/23/2021	SATI - 901 New Dock St	NH	2/13/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	122005
Drum 22	Drum	soil	12/23/2021	SATI - 901 New Dock St	H	2/14/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	01657594 FLE
Drum 23	Drum	soil	12/23/2021	SATI - 901 New Dock St	H	2/15/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	01657594 FLE
Drum 24	Drum	soil	12/22/2021	SATI - 901 New Dock St	H	2/16/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	016575795 FLE
Drum 25	Drum	debris	12/23/2021	SATI - 901 New Dock St	NH	1/24/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	122004
Drum 26	Drum	soil	12/28/2021	SATI - 901 New Dock St	H	1/24/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	016575795 FLE
Drum 27	Drum	soil	12/28/2021	SATI - 901 New Dock St	H	1/25/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	016575795 FLE
Drum 28	Drum	soil	12/28/2021	SATI - 901 New Dock St	H	1/26/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	016575795 FLE
Drum 29	Drum	soil	12/28/2021	SATI - 901 New Dock St	H	1/27/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	016575795 FLE
Drum 30	Drum	soil	12/28/2021	SATI - 901 New Dock St	H	1/28/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	016575795 FLE
Drum 31	Drum	water	12/28/2021	SATI - 901 New Dock St	NH	1/29/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	122006
Drum 32	Drum	soil	12/28/2021	SATI - 901 New Dock St	H	1/30/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	016575795 FLE
Drum 33	Drum	soil	12/28/2021	SATI - 901 New Dock St	H	1/31/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	016575795 FLE
Drum 34	Drum	soil	12/28/2021	SATI - 901 New Dock St	H	2/1/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	016575795 FLE
Drum 35	Drum	soil	12/28/2021	SATI - 901 New Dock St	H	2/2/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	016575795 FLE
Drum 36	Drum	soil	12/29/2021	SATI - 901 New Dock St	H	2/3/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	016575795 FLE
Drum 37	Drum	soil	12/29/2021	SATI - 901 New Dock St	H	2/4/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	016575795 FLE
Drum 38	Drum	soil	12/29/2021	SATI - 901 New Dock St	H	2/5/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	016575795 FLE
Drum 39	Drum	soil	12/29/2021	SATI - 901 New Dock St	H	2/6/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	016575795 FLE
Drum 40	Drum	soil	12/29/2021	SATI - 901 New Dock St	H	2/7/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	016575795 FLE
Drum 41	Drum	soil	12/29/2021	SATI - 901 New Dock St	H	2/8/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	016575795 FLE
Drum 42	Drum	soil	12/29/2021	SATI - 901 New Dock St	H	2/9/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	016575795 FLE
Drum 43	Drum	soil	1/24/2022	SATI - 901 New Dock St	H	1/31/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	16575819
Drum 44	Drum	soil	1/24/2022	SATI - 901 New Dock St	H	1/31/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	16575819
Drum 45	Drum	soil	1/24/2022	SATI - 901 New Dock St	H	1/31/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	16575819

GSI ENVIRONMENTAL

Table 12: Drum and Waste Log

SA Recycling Facility

901 New Dock Street, Terminal Island, CA

Drum ID	Container Type (D, RO, O)	Matrix	Date Generated	Temporary Storage Location	Non-RCRA Hazardous (H)/ Non-Hazardous (NH)	Pickup Date	Receiving Facility	Manifest Number
Drum 46	Drum	soil	1/24/2022	SATI - 901 New Dock St	H	1/31/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	16575819
Drum 47	Drum	soil	1/24/2022	SATI - 901 New Dock St	H	1/31/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	16575819
Drum 48	Drum	soil	1/24/2022	SATI - 901 New Dock St	H	1/31/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	16575819
Drum 49	Drum	soil	1/24/2022	SATI - 901 New Dock St	H	1/31/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	16575819
Drum 50	Drum	soil	1/24/2022	SATI - 901 New Dock St	H	1/31/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	16575819
Drum 51	Drum	soil	1/24/2022	SATI - 901 New Dock St	H	1/31/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	16575819
Drum 52	Drum	soil	1/24/2022	SATI - 901 New Dock St	H	1/31/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	16575819
Drum 53	Drum	soil	1/24/2022	SATI - 901 New Dock St	H	1/31/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	16575819
Drum 54	Drum	soil	1/24/2022	SATI - 901 New Dock St	H	1/31/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	16575819
Drum 55	Drum	soil	1/24/2022	SATI - 901 New Dock St	H	1/31/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	16575819
Drum 56	Drum	soil	1/25/2022	SATI - 901 New Dock St	H	1/31/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	16575819
Drum 57	Drum	soil	1/25/2022	SATI - 901 New Dock St	H	1/31/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	16575819
Drum 58	Drum	soil	1/25/2022	SATI - 901 New Dock St	H	1/31/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	16575819
Drum 59	Drum	soil	1/25/2022	SATI - 901 New Dock St	H	1/31/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	16575819
Drum 60	Drum	soil	1/26/2022	SATI - 901 New Dock St	H	1/31/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	16575819
Drum 61	Drum	soil	1/26/2022	SATI - 901 New Dock St	H	1/31/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	16575819
Drum 62	Drum	soil	1/26/2022	SATI - 901 New Dock St	H	1/31/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	16575819
Drum 63	Drum	soil	1/26/2022	SATI - 901 New Dock St	H	1/31/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	16575819
Drum 64	Drum	soil	1/26/2022	SATI - 901 New Dock St	H	1/31/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	16575819
Drum 65	Drum	soil	1/26/2022	SATI - 901 New Dock St	H	1/31/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	16575819
Drum 66	Drum	soil	1/27/2022	SATI - 901 New Dock St.	H	1/31/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	16575819
Drum 67	Drum	soil	1/27/2022	SATI - 901 New Dock St.	H	1/31/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	16575819
Drum 68	Drum	soil	1/27/2022	SATI - 901 New Dock St.	H	1/31/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	16575819
Drum 69	Drum	soil	1/28/2022	SATI - 901 New Dock St.	H	1/31/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	16575819
Drum 70	Drum	soil	1/28/2022	SATI - 901 New Dock St.	H	1/31/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	16575819
Drum 71	Drum	soil	1/28/2022	SATI - 901 New Dock St.	H	1/31/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	16575819
Drum 72	Drum	soil	1/28/2022	SATI - 901 New Dock St.	H	1/31/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	16575819
Drum 73	Drum	soil	1/28/2022	SATI - 901 New Dock St.	H	1/31/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	16575819
Drum 74	Drum	soil	1/28/2022	SATI - 901 New Dock St.	H	1/31/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	16575819
Drum 75	Drum	soil	1/28/2022	SATI - 901 New Dock St.	H	1/31/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	16575819
Drum 76	Drum	soil	1/31/2022	SATI - 901 New Dock St.	H	2/8/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	015014514
Drum 77	Drum	soil	1/31/2022	SATI - 901 New Dock St.	H	2/8/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	015014514
Drum 78	Drum	soil	1/31/2022	SATI - 901 New Dock St.	H	2/8/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	015014514
Drum 79	Drum	soil	1/31/2022	SATI - 901 New Dock St.	H	2/8/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	015014514
Drum 80	Drum	soil	1/31/2022	SATI - 901 New Dock St.	H	2/8/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	015014514
Drum 81	Drum	soil	2/1/2022	SATI - 901 New Dock St.	H	2/8/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	015014514
Drum 82	Drum	soil	2/1/2022	SATI - 901 New Dock St.	H	2/8/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	015014514
Drum 83	Drum	soil	2/1/2022	SATI - 901 New Dock St.	H	2/8/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	015014514
Drum 84	Drum	soil	2/1/2022	SATI - 901 New Dock St.	H	2/8/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	015014514
Drum 85	Drum	soil	2/2/2022	SATI - 901 New Dock St.	H	2/8/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	015014514
Drum 86	Drum	water	2/2/2022	SATI - 901 New Dock St.	NH	2/8/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	015014514
Drum 87	Drum	water	2/2/2022	SATI - 901 New Dock St.	NH	2/8/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	015014514
Drum 88	Drum	water	2/2/2022	SATI - 901 New Dock St.	NH	2/8/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	015014514
Drum 89	Drum	water	2/2/2022	SATI - 901 New Dock St.	NH	2/8/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	015014514
Drum 90	Drum	water	2/2/2022	SATI - 901 New Dock St.	NH	2/8/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	015014514
Drum 91	Drum	water	2/2/2022	SATI - 901 New Dock St.	NH	2/8/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	015014514
Drum 92	Drum	water	2/2/2022	SATI - 901 New Dock St.	NH	2/8/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	015014514

GSI ENVIRONMENTAL

Table 12: Drum and Waste Log

SA Recycling Facility

901 New Dock Street, Terminal Island, CA

Drum ID	Container Type (D, RO, O)	Matrix	Date Generated	Temporary Storage Location	Non-RCRA Hazardous (H)/ Non-Hazardous (NH)	Pickup Date	Receiving Facility	Manifest Number
Drum 93	Drum	water	2/2/2022	SATI - 901 New Dock St.	NH	2/8/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	015014514
Drum 94	Drum	water	2/2/2022	SATI - 901 New Dock St.	NH	2/8/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	015014514
Drum 95	Drum	water	2/2/2022	SATI - 901 New Dock St.	NH	2/8/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	015014514
Drum 96	Drum	water	2/3/2022	SATI - 901 New Dock St.	NH	2/8/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	015014514
Drum 97	Drum	water	2/3/2022	SATI - 901 New Dock St.	NH	2/8/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	015014514
Drum 98	Drum	water	2/3/2022	SATI - 901 New Dock St.	NH	2/8/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	015014514
Drum 99	Drum	water	2/3/2022	SATI - 901 New Dock St.	NH	2/8/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	015014514
Drum 100	Drum	water	2/3/2022	SATI - 901 New Dock St.	NH	2/8/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	015014514
Drum 101	Drum	water	2/3/2022	SATI - 901 New Dock St.	NH	2/8/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	015014514
Drum 102	Drum	water	2/3/2022	SATI - 901 New Dock St.	NH	2/8/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	015014514
Drum 103	Drum	water	2/3/2022	SATI - 901 New Dock St.	NH	2/8/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	015014514
Drum 104	Drum	water	2/3/2022	SATI - 901 New Dock St.	NH	2/8/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	015014514
Drum 105	Drum	water	2/3/2022	SATI - 901 New Dock St.	NH	2/8/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	015014514
Drum 106	Drum	water	2/3/2022	SATI - 901 New Dock St.	NH	2/8/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	015014514
Drum 107	Drum	water	2/3/2022	SATI - 901 New Dock St.	NH	2/8/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	015014514
Drum 108	Drum	water	2/3/2022	SATI - 901 New Dock St.	NH	2/8/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	015014514
Drum 109	Drum	water	2/3/2022	SATI - 901 New Dock St.	NH	2/8/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	015014514
Drum 110	Drum	water	2/3/2022	SATI - 901 New Dock St.	NH	2/8/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	015014514
Drum 111	Drum	water	2/3/2022	SATI - 901 New Dock St.	NH	2/8/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	015014514
Drum 112	Drum	water	2/3/2022	SATI - 901 New Dock St.	NH	2/8/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	015014514
Drum 113	Drum	water	2/3/2022	SATI - 901 New Dock St.	NH	2/8/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	015014514
Drum 114	Drum	water	2/3/2022	SATI - 901 New Dock St.	NH	2/8/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	015014514
Drum 115	Drum	water	2/3/2022	SATI - 901 New Dock St.	NH	2/8/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	015014514
Drum 116	Drum	water	2/3/2022	SATI - 901 New Dock St.	NH	2/8/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	015014514
Drum 117	Drum	water	2/3/2022	SATI - 901 New Dock St.	NH	2/8/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	015014514
Drum 118	Drum	water	2/3/2022	SATI - 901 New Dock St.	NH	2/8/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	015014514
Drum 119	Drum	soil	2/3/2022	SATI - 901 New Dock St.	H	2/8/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	015014514
Drum 120	Drum	soil	2/3/2022	SATI - 901 New Dock St.	H	2/8/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	015014514
Drum 121	Drum	soil	2/3/2022	SATI - 901 New Dock St.	H	2/8/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	015014514
Drum 122	Drum	soil	2/3/2022	SATI - 901 New Dock St.	H	2/8/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	015014514
Drum 123	Drum	soil	2/3/2022	SATI - 901 New Dock St.	H	2/8/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	015014514
Drum 124	Drum	soil	2/3/2022	SATI - 901 New Dock St.	H	2/8/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	015014514
Drum 125	Drum	soil	2/3/2022	SATI - 901 New Dock St.	H	2/8/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	015014514
Drum 126	Drum	soil	2/4/2022	SATI - 901 New Dock St.	H	2/8/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	015014514
Drum 127	Drum	soil	2/4/2022	SATI - 901 New Dock St.	H	2/8/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	015014514
Drum 128	Drum	soil	2/4/2022	SATI - 901 New Dock St.	H	2/8/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	015014514
Drum 129	Drum	soil	2/4/2022	SATI - 901 New Dock St.	H	2/8/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	015014514
Drum 130	Drum	soil	2/4/2022	SATI - 901 New Dock St.	H	2/8/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	015014514
Drum 131	Drum	soil	2/4/2022	SATI - 901 New Dock St.	H	2/8/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	015014514
Drum 132	Drum	soil	2/4/2022	SATI - 901 New Dock St.	H	2/8/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	015014514
Drum 133	Drum	soil	2/4/2022	SATI - 901 New Dock St.	H	2/8/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	015014514
Drum 134	Drum	soil	2/4/2022	SATI - 901 New Dock St.	H	2/8/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	015014514
Drum 135	Drum	water	2/4/2022	SATI - 901 New Dock St.	NH	2/8/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	015014514
Drum 136	Drum	water	2/4/2022	SATI - 901 New Dock St.	NH	2/8/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	015014514
Drum 137	Drum	water	2/4/2022	SATI - 901 New Dock St.	NH	2/8/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	015014514
Drum 138	Drum	water	2/4/2022	SATI - 901 New Dock St.	NH	2/8/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	015014514
Drum 139	Drum	water	2/4/2022	SATI - 901 New Dock St.	NH	2/8/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	015014514

GSI ENVIRONMENTAL

Table 12: Drum and Waste Log

SA Recycling Facility

901 New Dock Street, Terminal Island, CA

Drum ID	Container Type (D, RO, O)	Matrix	Date Generated	Temporary Storage Location	Non-RCRA Hazardous (H)/ Non-Hazardous (NH)	Pickup Date	Receiving Facility	Manifest Number
Drum 140	Drum	water	2/4/2022	SATI - 901 New Dock St.	NH	2/8/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	015014514
Drum 141	Drum	water	2/4/2022	SATI - 901 New Dock St.	NH	2/8/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	015014514
46 Totes of Plants	Tote Bags	plants	1/2/2022 - TBD	SATI - 901 New Dock St.	H	3/2/2021	South Yuma County Landfill 19536 South Avenue 1E Yuma, AZ 85366	016576552
Drum 142	Drum	soil	2/8/2022	SATI - 901 New Dock St.	H	3/7/2021	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	16576610
Drum 143	Drum	soil	2/9/2022	SATI - 901 New Dock St.	H	3/2/2021	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	016576599
Drum 144	Drum	soil	2/10/2022	SATI - 901 New Dock St.	H	3/7/2021	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	16576610
Drum 145	Drum	soil	2/11/2022	SATI - 901 New Dock St.	H	3/7/2021	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	16576610
Drum 146	Drum	soil	2/11/2022	SATI - 901 New Dock St.	H	3/7/2021	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	16576610
Drum 147	Drum	soil	2/11/2022	SATI - 901 New Dock St.	H	3/7/2021	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	16576610
Drum 148	Drum	soil	2/11/2022	SATI - 901 New Dock St.	H	3/7/2021	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	16576610
Drum 149	Drum	soil	2/11/2022	SATI - 901 New Dock St.	H	3/7/2021	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	16576610
Drum 150	Drum	soil	2/11/2022	SATI - 901 New Dock St.	H	3/7/2021	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	16576610
Drum 151	Drum	soil	2/14/2022	SATI - 901 New Dock St.	H	3/7/2021	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	16576612
Drum 152	Drum	soil	2/14/2022	SATI - 901 New Dock St.	H	3/7/2021	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	16576612
Drum 153	Drum	soil	2/14/2022	SATI - 901 New Dock St.	H	3/7/2021	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	16576612
Drum 154	Drum	soil	2/14/2022	SATI - 901 New Dock St.	H	3/7/2021	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	16576610
Drum 155	Drum	soil	2/14/2022	SATI - 901 New Dock St.	H	3/7/2021	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	16576610
Drum 156	Drum	soil	2/14/2022	SATI - 901 New Dock St.	H	3/7/2021	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	16576610
Drum 157	Drum	soil	2/15/2022	SATI - 901 New Dock St.	H	3/7/2021	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	16576610
Drum 158	Drum	soil	2/15/2022	SATI - 901 New Dock St.	H	3/7/2021	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	16576612
Drum 159	Drum	soil	2/16/2022	SATI - 901 New Dock St.	H	3/7/2021	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	16576612
Drum 160	Drum	soil	2/17/2022	SATI - 901 New Dock St.	H	3/7/2021	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	16576610
Drum 161	Drum	soil	2/17/2022	SATI - 901 New Dock St.	H	3/2/2021	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	016576599
Drum 162	Drum	soil	2/17/2022	SATI - 901 New Dock St.	H	3/2/2021	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	016576599
Drum 163	Drum	water	2/17/2022	SATI - 901 New Dock St.	NH	3/7/2021	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	117128
Drum 164	Drum	soil	2/17/2022	SATI - 901 New Dock St.	H	3/7/2021	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	16576612
Drum 165	Drum	soil	2/18/2022	SATI - 901 New Dock St.	H	3/7/2021	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	16576612
Drum 166	Drum	soil	2/18/2022	SATI - 901 New Dock St.	H	3/7/2021	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	16576610
Drum 167	Drum	water	2/18/2022	SATI - 901 New Dock St.	NH	3/7/2021	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	117128
Drum 168	Drum	soil	2/18/2022	SATI - 901 New Dock St.	H	3/7/2021	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	16576612
Drum 169	Drum	soil	2/21/2022	SATI - 901 New Dock St.	H	3/2/2021	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	016576599
Drum 170	Drum	soil	2/21/2022	SATI - 901 New Dock St.	H	3/2/2021	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	016576599
Drum 171	Drum	soil	2/21/2022	SATI - 901 New Dock St.	H	3/7/2021	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	16576612
Drum 172	Drum	soil	2/22/2022	SATI - 901 New Dock St.	H	3/7/2021	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	16576612
Drum 173	Drum	soil	2/22/2022	SATI - 901 New Dock St.	H	3/7/2021	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	16576612
Drum 174	Drum	soil	2/22/2022	SATI - 901 New Dock St.	H	3/2/2021	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	016576599
Drum 175	Drum	soil	2/22/2022	SATI - 901 New Dock St.	H	3/2/2021	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	016576599
Drum 176	Drum	soil	2/24/2022	SATI - 901 New Dock St.	H	3/7/2021	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	16576612
Drum 177	Drum	soil	2/24/2022	SATI - 901 New Dock St.	H	3/7/2021	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	16576610
Drum 178	Drum	soil	2/24/2022	SATI - 901 New Dock St.	H	3/2/2021	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	016576599
Drum 179	Drum	soil	2/24/2022	SATI - 901 New Dock St.	H	3/2/2021	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	016576599
Drum 180	Drum	soil	2/25/2022	SATI - 901 New Dock St.	H	3/2/2021	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	016576599
Drum 181	Drum	soil	2/25/2022	SATI - 901 New Dock St.	H	3/2/2021	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	016576599
Drum 182	Drum	soil	2/25/2022	SATI - 901 New Dock St.	H	3/2/2021	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	016576599
Drum 183	Drum	soil	2/25/2022	SATI - 901 New Dock St.	H	3/7/2021	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	16576612
Drum 184	Drum	soil	2/28/2022	SATI - 901 New Dock St.	H	3/2/2021	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	016576599

GSI ENVIRONMENTAL

Table 12: Drum and Waste Log

SA Recycling Facility

901 New Dock Street, Terminal Island, CA

Drum ID	Container Type (D, RO, O)	Matrix	Date Generated	Temporary Storage Location	Non-RCRA Hazardous (H)/ Non-Hazardous (NH)	Pickup Date	Receiving Facility	Manifest Number
Drum 185	Drum	soil	2/28/2022	SATI - 901 New Dock St.	H	3/2/2021	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	016576599
Drum 186	Drum	soil	2/28/2022	SATI - 901 New Dock St.	H	3/7/2021	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	16576612
Drum 187	Drum	soil	3/1/2022	SATI - 901 New Dock St.	H	3/7/2021	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	16576612
Drum 188	Drum	soil	3/1/2022	SATI - 901 New Dock St.	H	3/2/2021	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	16576612
Drum 189	Drum	soil	3/2/2022	SATI - 901 New Dock St.	H	3/7/2021	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	16576610
Drum 190	Drum	soil	3/2/2022	SATI - 901 New Dock St.	H	3/7/2021	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	16576612
Drum 191	Drum	soil	3/2/2022	SATI - 901 New Dock St.	H	3/7/2021	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	16576610
Drum 192	Drum	soil	3/3/2022	SATI - 901 New Dock St.	H	3/7/2021	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	16576612
Drum 193	Drum	soil	3/3/2022	SATI - 901 New Dock St.	H	3/7/2021	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	16576610
Drum 194	Drum	soil	3/7/2022	SATI - 901 New Dock St.	H	4/22/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	016576243
6 totes of plants	Tote Bags	plants	3/8/2022	SATI - 901 New Dock St.	H	4/13/2022	South Yuma County Landfill 19536 South Avenue 1E Yuma, AZ 85366	016576178
Drum 195	Drum	soil	3/8/2022	SATI - 901 New Dock St.	H	4/11/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	016576162, 016576163, 016576164
Drum 196	Drum	soil	3/8/2022	SATI - 901 New Dock St.	H	4/11/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	016576162, 016576163, 016576164
Drum 197	Drum	soil	3/8/2022	SATI - 901 New Dock St.	H	4/11/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	016576162, 016576163, 016576164
Drum 198	Drum	soil	3/8/2022	SATI - 901 New Dock St.	H	4/11/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	016576162, 016576163, 016576164
Drum 199	Drum	soil	3/8/2022	SATI - 901 New Dock St.	H	4/11/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	016576162, 016576163, 016576164
Drum 200	Drum	soil	3/9/2022	SATI - 901 New Dock St.	H	4/11/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	016576162, 016576163, 016576164
Drum 201	Drum	soil	3/9/2022	SATI - 901 New Dock St.	H	4/11/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	016576162, 016576163, 016576164
Drum 202	Drum	soil	3/9/2022	SATI - 901 New Dock St.	H	4/11/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	016576162, 016576163, 016576164
Drum 203	Drum	soil	3/10/202	SATI - 901 New Dock St.	H	4/11/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	016576162, 016576163, 016576164
Drum 204	Drum	soil	3/10/202	SATI - 901 New Dock St.	H	4/22/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	016576244
Drum 205	Drum	asbestos boards	3/10/202	SATI - 901 New Dock St.	H	4/22/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	016576243
Drum 206	Drum	soil	3/11/2022	SATI - 901 New Dock St.	H	4/11/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	016576162, 016576163, 016576164
Drum 207	Drum	soil	3/11/2022	SATI - 901 New Dock St.	H	4/11/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	016576162, 016576163, 016576164
Drum 208	Drum	soil	3/11/2022	SATI - 901 New Dock St.	H	4/11/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	016576162, 016576163, 016576164
Drum 209	Drum	water	3/14/2022	SATI - 901 New Dock St.	NH	4/11/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	128621
Drum 210	Drum	water	3/14/2022	SATI - 901 New Dock St.	NH	4/11/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	128621
Drum 211	Drum	water	3/14/2022	SATI - 901 New Dock St.	NH	4/11/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	128621
Drum 212	Drum	water	3/14/2022	SATI - 901 New Dock St.	NH	4/11/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	128621
Drum 213	Drum	soil	3/14/2022	SATI - 901 New Dock St.	H	4/11/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	016576162, 016576163, 016576164
Drum 214	Drum	soil	3/14/2022	SATI - 901 New Dock St.	H	4/11/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	016576162, 016576163, 016576164
Drum 215	Drum	soil	3/14/2022	SATI - 901 New Dock St.	H	4/11/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	016576162, 016576163, 016576164
Drum 216	Drum	soil	3/14/2022	SATI - 901 New Dock St.	H	4/11/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	016576162, 016576163, 016576164
Drum 217	Drum	soil	3/14/2022	SATI - 901 New Dock St.	H	4/11/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	016576162, 016576163, 016576164
Drum 218	Drum	soil	3/14/2022	SATI - 901 New Dock St.	H	4/11/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	016576162, 016576163, 016576164
Drum 219	Drum	soil	3/15/2022	SATI - 901 New Dock St.	H	4/11/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	016576162, 016576163, 016576164
Drum 220	Drum	soil	3/15/2022	SATI - 901 New Dock St.	H	4/11/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	016576162, 016576163, 016576164
Drum 221	Drum	soil	3/15/2022	SATI - 901 New Dock St.	H	4/11/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	016576162, 016576163, 016576164
Drum 222	Drum	soil	3/15/2022	SATI - 901 New Dock St.	H	4/11/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	016576162, 016576163, 016576164
Drum 223	Drum	soil	3/15/2022	SATI - 901 New Dock St.	H	4/11/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	016576162, 016576163, 016576164
Drum 224	Drum	soil	3/15/2022	SATI - 901 New Dock St.	H	4/11/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	016576162, 016576163, 016576164
Drum 225	Drum	soil	3/15/2022	SATI - 901 New Dock St.	H	4/11/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	016576162, 016576163, 016576164
Drum 226	Drum	soil	3/16/2022	SATI - 901 New Dock St.	H	4/11/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	016576162, 016576163, 016576164
Drum 226B	Drum	soil	3/16/2022	SATI - 901 New Dock St.	H	4/11/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	016576162, 016576163, 016576164
Drum 227	Drum	soil	3/16/2022	SATI - 901 New Dock St.	H	4/11/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	016576162, 016576163, 016576164

GSI ENVIRONMENTAL

Table 12: Drum and Waste Log

SA Recycling Facility

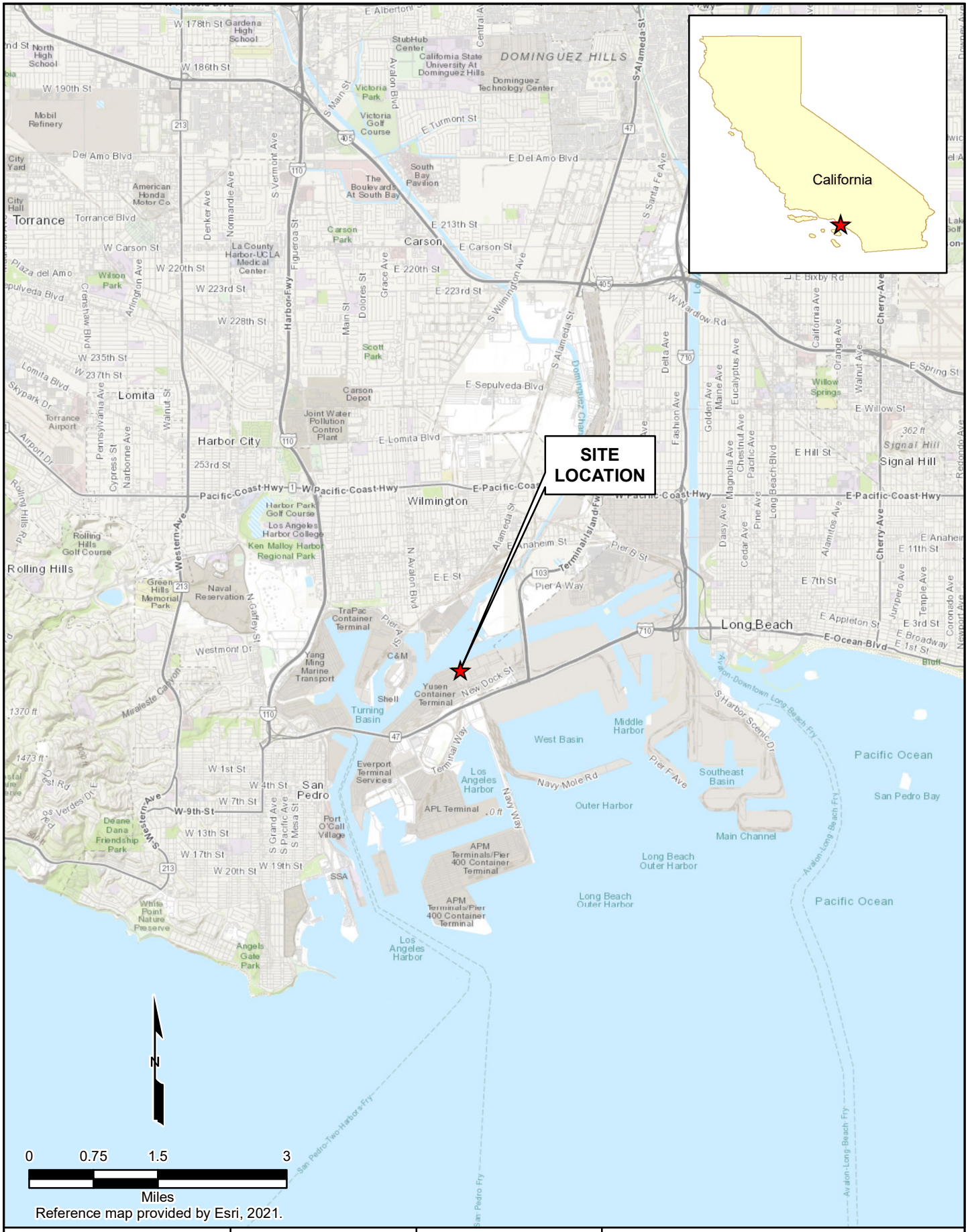
901 New Dock Street, Terminal Island, CA

Drum ID	Container Type (D, RO, O)	Matrix	Date Generated	Temporary Storage Location	Non-RCRA Hazardous (H)/ Non-Hazardous (NH)	Pickup Date	Receiving Facility	Manifest Number
Drum 228	Drum	soil	3/16/2022	SATI - 901 New Dock St.	H	4/11/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	016576162, 016576163, 016576164
Drum 229	Drum	soil	3/16/2022	SATI - 901 New Dock St.	H	4/11/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	016576162, 016576163, 016576164
Drum 230	Drum	soil	3/16/2022	SATI - 901 New Dock St.	H	4/11/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	016576162, 016576163, 016576164
Drum 231	Drum	soil	3/16/2022	SATI - 901 New Dock St.	H	4/11/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	016576162, 016576163, 016576164
Drum 232	Drum	soil	3/16/2022	SATI - 901 New Dock St.	H	4/11/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	016576162, 016576163, 016576164
Drum 233	Drum	soil	3/16/2022	SATI - 901 New Dock St.	H	4/11/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	016576162, 016576163, 016576164
Drum 234	Drum	soil	4/6/2022	SATI - 901 New Dock St.	H	4/11/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	016576162, 016576163, 016576164
Drum 235	Drum	soil	4/6/2022	SATI - 901 New Dock St.	H	4/11/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	016576162, 016576163, 016576164
Drum 236	Drum	soil	4/6/2022	SATI - 901 New Dock St.	H	4/11/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	016576162, 016576163, 016576164
Drum 237	Drum	soil	4/11/2022	SATI - 901 New Dock St.	H	4/19/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	016576231
Drum 238	Drum	soil	4/11/2022	SATI - 901 New Dock St.	H	4/19/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	016576231
Drum 239	Drum	soil	4/11/2022	SATI - 901 New Dock St.	H	4/19/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	016576231
Drum 240	Drum	soil	4/11/2022	SATI - 901 New Dock St.	H	4/19/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	016576231
Drum 241	Drum	soil	4/13/2022	SATI - 901 New Dock St.	H	4/19/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	016576231
Drum 242	Drum	soil	4/13/2022	SATI - 901 New Dock St.	H	4/19/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	016576231
Drum 243	Drum	soil	4/13/2022	SATI - 901 New Dock St.	H	4/19/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	016576231
Drum 244	Drum	soil	4/13/2022	SATI - 901 New Dock St.	H	4/19/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	016576231
Drum 245	Drum	soil	4/13/2022	SATI - 901 New Dock St.	H	4/19/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	016576231
Drum 246	Drum	soil	4/13/2022	SATI - 901 New Dock St.	H	4/19/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	016576231
Drum 247	Drum	soil	4/14/2022	SATI - 901 New Dock St.	H	4/19/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	016576231
Drum 248	Drum	soil	4/14/2022	SATI - 901 New Dock St.	H	4/19/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	016576231
Drum 249	Drum	soil	4/14/2022	SATI - 901 New Dock St.	H	4/19/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	016576231
Drum 250	Drum	soil	4/14/2022	SATI - 901 New Dock St.	H	4/19/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	016576231
Drum 251	Drum	soil	4/14/2022	SATI - 901 New Dock St.	H	4/19/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	016576231
Drum 252	Drum	soil	4/14/2022	SATI - 901 New Dock St.	H	4/19/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	016576231
Drum 253	Drum	soil	4/15/2022	SATI - 901 New Dock St.	H	4/19/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	016576231
Drum 254	Drum	soil	4/15/2022	SATI - 901 New Dock St.	H	4/19/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	016576231
Drum 255	Drum	soil	4/15/2022	SATI - 901 New Dock St.	H	4/19/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	016576231
Drum 256	Drum	soil	4/15/2022	SATI - 901 New Dock St.	H	4/19/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	016576231
Drum 257	Drum	soil	4/15/2022	SATI - 901 New Dock St.	H	4/19/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	016576231
Drum 258	Drum	soil	4/15/2022	SATI - 901 New Dock St.	H	4/19/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	016576231
Drum 259	Drum	soil	4/18/2022	SATI - 901 New Dock St.	H	4/19/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	016576231
Drum 260	Drum	soil	4/18/2022	SATI - 901 New Dock St.	H	4/19/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	016576231
Drum 261	Drum	soil	4/18/2022	SATI - 901 New Dock St.	H	4/19/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	016576231
Drum 262	Drum	plants	4/19/2022	SATI - 901 New Dock St.	H	4/22/2022	South Yuma County Landfill 19536 South Avenue 1E Yuma, AZ 85366	016576242
Drum 263	Drum	plants	4/19/2022	SATI - 901 New Dock St.	H	4/22/2022	South Yuma County Landfill 19536 South Avenue 1E Yuma, AZ 85366	016576242
Drum 264	Drum	plants	4/19/2022	SATI - 901 New Dock St.	H	4/22/2022	South Yuma County Landfill 19536 South Avenue 1E Yuma, AZ 85366	016576242
Drum 265	Drum	plants	4/19/2022	SATI - 901 New Dock St.	H	4/22/2022	South Yuma County Landfill 19536 South Avenue 1E Yuma, AZ 85366	016576242
Drum 266	Drum	plants	4/19/2022	SATI - 901 New Dock St.	H	4/22/2022	South Yuma County Landfill 19536 South Avenue 1E Yuma, AZ 85366	016576242
Drum 267	Drum	plants	4/19/2022	SATI - 901 New Dock St.	H	4/22/2022	South Yuma County Landfill 19536 South Avenue 1E Yuma, AZ 85366	016576242
Drum 268	Drum	plants	4/19/2022	SATI - 901 New Dock St.	H	4/22/2022	South Yuma County Landfill 19536 South Avenue 1E Yuma, AZ 85366	016576242
Drum 269	Drum	plants	4/19/2022	SATI - 901 New Dock St.	H	4/22/2022	South Yuma County Landfill 19536 South Avenue 1E Yuma, AZ 85366	016576242
Drum 270	Drum	water	4/19/2022	SATI - 901 New Dock St.	NH	4/22/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	016576235
Drum 271	Drum	soil	4/21/2022	SATI - 901 New Dock St.	H	4/22/2022	US Ecology HWY 95, 11 Miles Sourth of Beatty, Batty Nv 89003	016576243

Off-Site LFM Interim Cleanup and Sampling Results Memorandum
901 New Dock Street
Terminal Island, California 90731

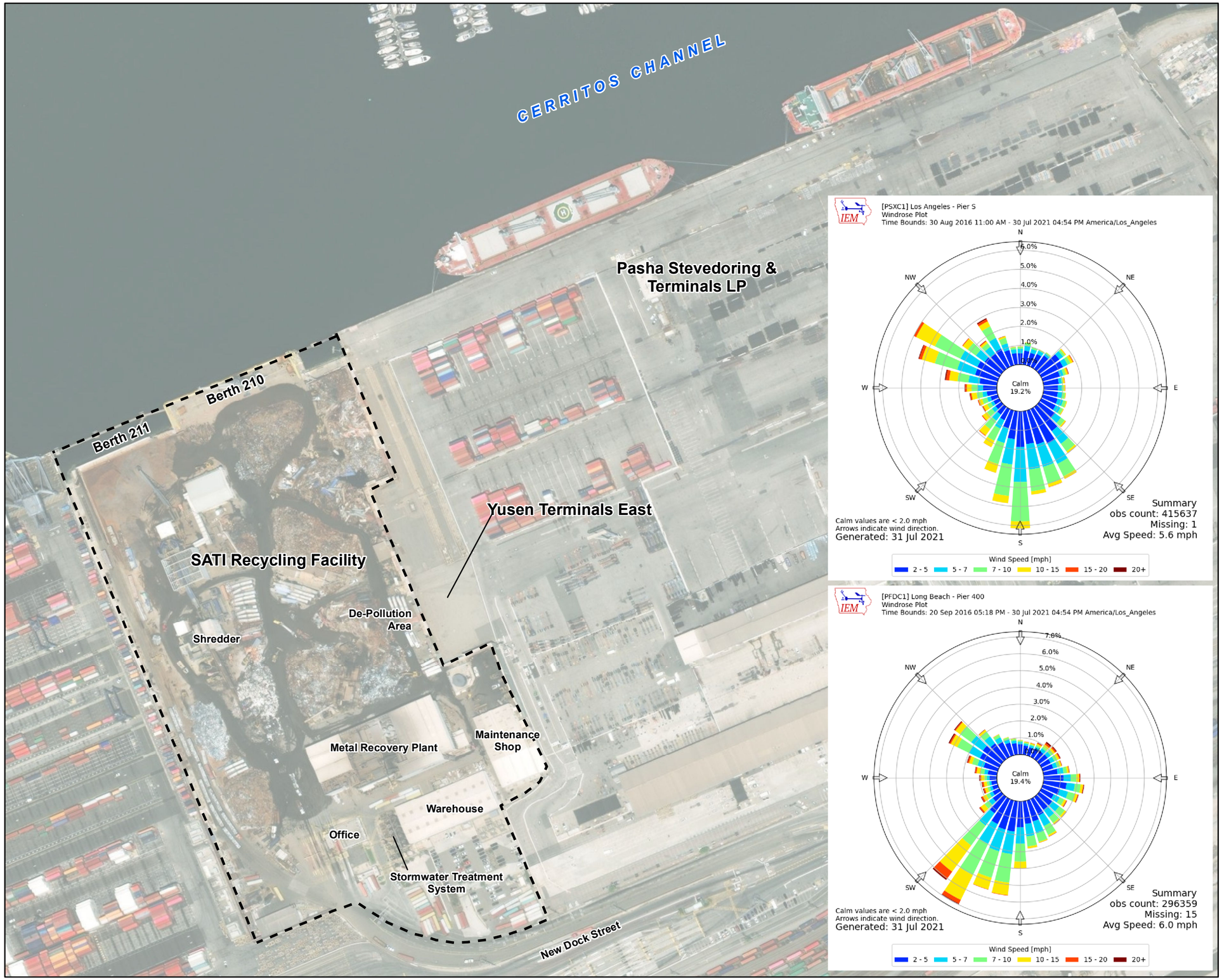
FIGURES

Figure 1 – Site Location Map
Figure 2 – Site Plan
Figure 3 – Sampling Locations



Reference map provided by Esri, 2021.

GSI ENVIRONMENTAL	GSI Job No. 6013	Drawn by: AV	**SITE LOCATION MAP**
	Issued: 30-Mar-2022	Chk'd by: GM	SA Recycling LLC 901 New Dock Street, San Pedro, California
	Revised:	Aprv'd by: TW	
	Map ID: SATI_TopoMap	**FIGURE 1**	



N

LEGEND

Property Boundary

Notes

1) Aerial imagery provided by Esri ArcGIS Online, November 2020.
2) Windrose plot downloaded from: https://mesonet.agron.iastate.edu/sites/windrose.phtml?station=PFDC1&network=CA_DCP, on October 14, 2021.

Feet
0 100 200

Projected Coordinate System
Datum: NAD 83
State Plane California Zone V
Units: Feet

GSI ENVIRONMENTAL

SITE PLAN

SA Recycling LLC
901 New Dock Street, San Pedro, California

GSI Job No.	6013	Drawn By:	GM
Issued:	22-Apr-2022	Chk'd By:	TW
Map ID:	SATI_SiteMap	Appv'd By:	TW

FIGURE 2

N

LEGEND

- LFM Sample
- LFM Mix Sample
- No LFM; Sediment Sample
- Property Boundary

Note

Aerial imagery provided by Esri ArcGIS Online, July 2021.

Feet
0 100 200

Projected Coordinate System
Datum: NAD 83
State Plane California Zone V
Units: Feet

GSI ENVIRONMENTAL

SAMPLE LOCATIONS

SA Recycling LLC
901 New Dock Street, San Pedro, California

GSI Job No.	6013	Drawn By:	AV
Issued:	19-Apr-2022	Chk'd By:	GM
Map ID:	SATI_SampleLocs	Appv'd By:	TW

FIGURE 3

Off-Site LFM Interim Cleanup and Sampling Results Memorandum
901 New Dock Street
Terminal Island, California 90731

ATTACHMENTS

Off-Site LFM Interim Cleanup and Sampling Results Memorandum
901 New Dock Street
Terminal Island, California 90731

ATTACHMENT A

DTSC October 2021 Report

Department of Toxic Substances Control

Jared Blumenfeld
Secretary for
Environmental Protection

Meredith Williams, Ph.D., Director
9211 Oakdale Avenue
Chatsworth, CA 91311

Gavin Newsom
Governor

September 30, 2021

Sent via e-mail only

Ms. Lindsey Maine
Environmental Manager
SA Recycling, LLC
3200 East Frontera Street
Anaheim, CA 92806
lmaine@sarecycling.com

ISSUANCE OF SAMPLING REPORT for SA RECYCLING, LLC, 901 NEW DOCK STREET, TERMINAL ISLAND, CA 90731

Dear Ms. Maine:

On September 1, 2021, the Department of Toxic Substances Control (DTSC) conducted an investigation of SA Recycling, LLC (CAL000338569), located at 901 New Dock Street, Terminal Island, CA 90731 (SATI) by conducting sampling at Pasha Stevedoring & Terminals, LP, located at 701 New Dock Street, Terminal Island, CA 90731. The purpose of this letter is to notify SATI of the results of this sampling.

As detailed in the enclosed Sampling Report, DTSC discovered violations of the Hazardous Waste Control Law and its implementing regulation during this inspection. You are required by Health and Safety Code section 25185, subdivision (c)(3) to submit a written response to DTSC within 30 days describing the corrective actions that you have taken or propose to take to bring SATI into compliance. If SATI disputes any of the violations or proposed corrective actions, SATI should explain the disagreement in this written response. The issuance of this letter does not preclude DTSC from taking administrative, civil, or criminal action as a result of the violations noted in this inspection report.

All pertinent information derived by DTSC from this investigation, including observations, photographs, and sample results are included as attachments to the enclosed sampling report.

Please note that the enclosed sampling report will become a public document. Pursuant to Health and Safety Code section 25173, you may request that any trade secret or facility security information be withheld from public disclosure. If you wish to assert the trade secret privilege, please provide DTSC with detailed, written responses to each of the following questions within 10 days of receipt of this letter:

- To what extent is there knowledge of the information conveyed by the photograph/document outside of your business?
- To what extent is there knowledge of the information conveyed by the photograph/document, by employees and others in your business?
- To what extent have measures been taken to guard the secrecy of the information?
- Is the information valuable to competitors? If so, why?
- Has there been substantial monetary expenditure in the development of the information?
- Could the information be easily and properly acquired or duplicated by others?

DTSC will review your response to these questions to determine if the information should be treated as trade secret and will notify you of its decision prior to making the enclosed inspection report available to the public.

If you have any questions regarding the inspection report, or if you wish to meet with DTSC to discuss any questions or concern you have with the investigation or the report, please call Larry Stuck, Senior Environmental Scientist (Specialist) at (818) 398-8111, or via e-mail at Larry.Stuck@dtsc.ca.gov.

Sincerely,

Richard L. Jones

Digitally signed by Richard L. Jones
Date: 2021.09.30 17:16:34 -07'00'

Richard L Jones
Senior Environmental Scientist (Supervisory)
Office of Criminal Investigations - Chatsworth
Hazardous Waste Management Program

Enclosure(s)

Sampling Report dated September 30, 2021
with Attachments

Department of Toxic Substances Control

Jared Blumenfeld
Secretary for
Environmental Protection

Meredith Williams, Ph.D., Director
9211 Oakdale Avenue
Chatsworth, California 91311

Gavin Newsom
Governor

Sampling Report
Office of Criminal Investigations

Facility/ Site Name: SA Recycling, LLC

Facility/Site Address: 901 New Dock Street, Terminal Island, California 90731

OCI Case Number: 14667

EPA ID: CAL000338569

Sampling Location: Pasha Stevedoring & Terminals L.P.
701 New Dock Street, San Pedro, California 90731

Dates of Site Visits: August 26, 2021 and September 01, 2021

Date Samples Collected: September 01, 2021

Date of Report: October 1, 2021

Report Completed by: Larry Stuck
Sr. Environmental Scientist (Specialist)

I. Summary of Sample Results

This Sampling Report is written to support an ongoing enforcement action by the Department of Toxic Substance Control's (DTSC), Office of Criminal Investigations (OCI) investigating SA Recycling, Terminal Island (SATI), located at 901 New Dock Street, San Pedro, California 90731. This Sampling Report documents the sampling activities OCI scientists performed on September 1, 2021. Eight samples containing light fibrous material (LFM) were collected from the neighboring yard to the east, operated by Pasha Stevedoring & Terminals L.P. (Pasha Terminals). The samples were collected from a storm drain, inside a utility vault that drains into the ocean, and from asphalt and concrete surfaces around the western portion of Pasha Terminals. All eight samples were hazardous for the characteristics of toxicity for soluble lead and zinc, and six of eight for soluble cadmium concentrations that exceeded the Soluble

Threshold Limit Concentration (STLC). Five of eight samples exhibit the characteristic of toxicity for total lead, and six of eight for total zinc concentrations that exceeded the Total Threshold Limit Concentrations (TTLC).

II. Representatives Present

DTSC Personnel:

Larry Stuck — August 26 & September 1, 2021
Senior Environmental Scientist (Specialist)
DTSC, Office of Criminal Investigations
9211 Oakdale Ave
Chatsworth, California 91311
Phone: (818) 717-6584
Email: Larry.Stuck@dtsc.ca.gov

Hansen Pang, Chief Investigator — August 26, 2021
DTSC, Office of Criminal Investigations
700 Heinz Avenue, #200
Berkeley, California 94710
Phone: (916) 217-9757
Email: Hansen.Pang@dtsc.ca.gov

Bailey Franklin — September 1, 2021
Senior Environmental Scientist (Specialist)
DTSC, Office of Criminal Investigations
9211 Oakdale Ave
Chatsworth, California 91311
Phone: (818)
Email: Bailey.Franklin@dtsc.ca.gov

Los Angeles Port Police Personnel:

Officer Dong Lee — August 26, 2021
Los Angeles Port Police
330 South Centre Street
San Pedro, CA 90731
(310) 732-0808
Email: dlee@portla.org

Pasha Stevedoring & Terminals L.P. Personnel:

Wray Bartling, MBA
Procurement & Cost Manager
Pasha Stevedoring & Terminals L.P.
802 S. Fries Avenue
Wilmington, CA 90744
Phone: (310) 233-835-9869
Email: Wray.Bartling@psterminals.com

September 1, 2021

III. Sampling Activities

Background/Summary:

DTSC previously conducted off-site sampling adjacent to the SA Recycling, LLC site on October 10, 2018. After the samples documented in this Sampling Report were obtained, I spoke with OCI Senior Environmental Scientist (Specialist) Shohreh Shahriary, as well as Sr. ES (Specialist) Allison Saldana, both of whom were present during the 2018 sampling event. During that time-period, the yards on both sides of SATI were being leased by Yusen - Terminal Island (YTI). At the 701 New Dock Street address they both mentioned that they had walked the area east of the chain link fence, which is still present today, but did not observe any LFM at the time. They took some X-ray Fluorescent (XRF) readings using a portable XRF meter and did not observe any conditions that would have initiated sampling in that area, once again to the east of the chain link fence, east of the concrete troughs. They both also discussed that since it was at night (which is when the SATI shredder operates), and there were many trailer chassis being stored in this area, which were surrounded by a perimeter of K-rails, a large portion of the area west of the chain link fence, was not accessible to be observed, or visible through the chain link fence. They both acknowledged that they did not access areas where large accumulations were clearly visible and observed during this investigation. They did find some patches of LFM on the west side of SATI, near the water's edge, which were sampled and documented in the Sampling Activities Report dated November 21, 2018, and previously provided to SATI.

On August 26, 2021, at approximately 1100 hours, Pang, Lee, and I traveled across the harbor channel on a LA Port Police boat to the Pasha Terminal. Wray Bartling from Pasha Terminals had granted us permission to look around the property. We climbed a ladder to enter the property and we walked the frontage yard looking for deposits of LFM. Pang opened a metal hatch covering a utility vault at the edge of the dock, which extends out above the water, approximately 220' from the SATI property line. We observed a large accumulation of LFM, feathers and dust on a ledge, a valve wheel, and on the floor of the vault.

We continued to walk towards the SATI facility. Parallel to the property line with SATI was a fenced yard approximately 100 feet wide in which there were two long concrete

channels, each approximately 20 feet wide and approximately 550 feet long. (This was later identified by Bartling as a truck washing system. As we walked south, away from the water, along the concrete channels we started to see accumulations of LFM and soil in cracks in the pavement and then scattered around the yard and inside the channels. Deposits of LFM up to 4" inches deep surrounded a chain-link fence surrounding an abandoned electrical utility box. Approximately 50 feet south of the south end of the east channel was a storm drain with a painted message "No Dumping Drains to Ocean." The grate was more than half covered with LFM, soil and vegetation. Pang took a few photographs, but we did not collect any samples.

On September 1, 2021, at approximately 1010 hours, Franklin and I met with Bartling and he led us to the fenced yard of the Pasha Terminal, just to the east of SATI. I asked Bartling for consent to collect samples and take photographs. He granted us consent.

Franklin and I observed large accumulations of LFM, at numerous locations in this area. We first walked to the storm drain that Pang and I previously observed **(see Attachment 1, Photos 1-5)** and started our sampling there. There were also large accumulations of LFM in and around the truck wash channels **(see Attachment 1, Photos 5-11)**. In another location, next to an old out of service electrical panel, there was a large accumulation of LFM surrounding it in all directions **(see Attachment 1, Photos 15-19)**.

Although we did not closely examine the vegetation along the chain link fence, it's anticipated that there will be accumulations of LFM in those areas **(see Attachment 1, Photos 2, 7 & 8)**.

Next, we drove to the edge of the dock where there are a series of utility vaults housing potable water pipelines and valves serving incoming ships. I lifted the hatch to one, approximately 220' from the property line with SATI, and observed a large accumulation of LFM, dirt and feathers on a ledge, valve wheel, and covering the floor **(see Attachment 1, Photos 27-33)**. The next vault was much cleaner, and I noticed an approximately 6" hole in the floor through which I could see the ocean below **(see Attachment 1, Photo 34)**. I believe the first vault would likely have a similar drain hole, but it was covered with LFM, soil and debris.

Franklin and I collected a total of eight samples from the vicinity east of SATI on property leased by Pasha Stevedoring & Terminals L.P. The approximate sample locations are identified on the Sample Location Map **(see Attachment 2)**.

All photographs taken during this sampling event are saved in electronic format on the DTSC drives. Photographs can be transferred to anyone needing a copy.

Sampling Team(s) and Roles:

Bailey Franklin – Primary sampler
Larry Stuck – Assistant sampler, Photographer, Documentation

Sampling Equipment, and QA Procedures:

New, individually sealed, disposable plastic scoops and gloved hands were used to collect each sample, which was placed into new 32-ounce, certified clean, clear glass wide mouth jars. Disposable gloves were changed between each sample collected. The samples were labeled with identifying information; the jars were sealed with evidence tape; the samples were photographed near where they were collected; and then placed into an ice chest cooled with blue ice.

Sampling strategy:

Authoritative samples were collected based upon our assessment of the numerous accumulations of LFM spread out across the yard. The storm drain location was selected as it provides a direct route for contamination that leads straight to the ocean. A utility vault was selected as it is next to the water and had an accumulation of LFM under the hatches. I observed that a similar utility vault, that is used to supply potable water to ships, had an approximately 4 to 6-inch circular opening through which I could see the port waters.

Chain of Custody:

Franklin maintained custody of the samples as they were being collected. After the eight samples were collected, Franklin and I transported the samples to the DTSC Environmental Chemistry Laboratory (ECL) in Pasadena. On September 1, 2021, Franklin transferred custody of the samples along with the Sample Analysis Request/Chain of Custody Form to Cesar Fernandez, Research Scientist Sup I, with ECL. Fernandez signed and dated the chain of custody and provided me a copy **(see Attachment 3, page 13)**.

Sample Details:

Photographic references for each sample are listed in Table 1. Summary of Sample Results on page 8.

Sample SATI-BF-01 was collected at approximately 1029 hours from the top of the storm drain grate in the paved lot immediately east of SA Recycling's 901 New Dock Street facility **(see Attachment 2)**, and approximately 50 feet south of the end of the eastern concrete trough. Franklin collected the sample using clean gloves and a plastic scoop to place the material into a new 32-ounce glass jar and closed the lid. The sample was gray LFM mixed with soil and vegetation. I wrote identifying information on

the label and then placed the label on the jar along with evidence tape over the lid. I photographed the sample where it was collected, and Franklin placed it into the ice chest. There was a notice painted on the asphalt next to this storm drain that said "No Dumping Drains to Ocean" with the numbers 7-21 (presumably the date painted) and a reference to LAMC (Los Angeles Municipal Code) 64.70 **(see Attachment 1, Photos 1 and 5)**.

Sample SATI-BF-02 was collected at approximately 1043 hours just west of the southern end of the east truck wash channel **(see Attachment 2)**, outside of the channel. Franklin collected the sample using clean gloves and a plastic scoop to place the material into a new 32-ounce glass jar and closed the lid. The sample was gray LFM mixed with soil. I wrote identifying information on the label and then placed the label on the jar along with evidence tape over the lid. I photographed the sample where it was collected, and Franklin placed it into the ice chest.

Sample SATI-BF-03 was collected at approximately 1051 hours inside the west truck wash channel near the south end **(see Attachment 2)**. Franklin collected the sample using clean gloves and a plastic scoop to place the material into a new 32-ounce glass jar and closed the lid. The sample was gray LFM mixed with soil. I wrote identifying information on the label and then placed the label on the jar along with evidence tape over the lid. I photographed the sample where it was collected, and Franklin placed it into the ice chest.

Sample SATI-BF-04 was collected at approximately 1104 hours from the material clinging to the side wall and corner of the storm drain vault **(see Attachment 2)** after a Pasha Terminal employee used a forklift to remove the storm drain grate for us. Franklin collected the sample using clean gloves and a plastic scoop to place the material into a new 32-ounce glass jar and closed the lid. The sample was gray LFM mixed with soil. I wrote identifying information on the label and then placed the label on the jar along with evidence tape over the lid. I photographed the sample in front of where it was collected, and Franklin placed it into the ice chest.

Sample SATI-BF-05 was collected at approximately 1111 hours just south of an abandoned electric utility box west of the truck wash channels **(see Attachment 2)**. I observed a noticeable accumulation of LFM in the area immediately surrounding this utility box in all directions **(see Attachment 1, Photos 15 thru 19)**. Franklin collected the sample using clean gloves and a plastic scoop to place the material into a new 32-ounce glass jar and closed the lid. The sample was gray LFM mixed with dirt. I wrote identifying information on the label and then placed the label on the jar along with evidence tape over the lid. I photographed the sample where it was collected, and Franklin placed it into the ice chest.

Sample SATI-BF-06 was collected at approximately 1117 hours inside the west truck wash channel near the electric box **(see Attachment 2)**. Franklin collected the sample using clean gloves and a plastic scoop to place the material into a new 32-ounce glass

jar and closed the lid. The sample was gray LFM mixed with dirt. I wrote identifying information on the label and then placed the label on the jar along with evidence tape over the lid and handed the sample back to Franklin, along with my iPhone, to photograph the sample inside the channel. Once Franklin took Photos 21 thru 23, she took the sample and placed it into the ice chest.

Sample SATI-BF-07 was collected at approximately 1127 hours from an accumulation along a section of railroad track embedded in the pavement in an east-west direction north of the electrical utility box **(see Attachment 2)**. Franklin collected the sample using clean gloves and a plastic scoop to place the material into a new 32-ounce glass jar and closed the lid. The sample was gray LFM mixed with dirt. I wrote identifying information on the label and then placed the label on the jar along with evidence tape over the lid. I photographed the sample where it was collected, and Franklin placed it into the ice chest.

Sample SATI-BF-08 was collected at approximately 1152 hours inside a utility vault, housing valves that turn potable water flow on and off to ships docked at the terminal. There was an accumulation of LFM under the hatches, on the valve wheel, and the floor of the vault. This vault likely has a drain like the one observed in another utility vault further away from SATI, but it was not visible because the LFM, soil, feathers and debris covered the floor, and presumably the 6" drain hole. This vault is located approximately 220' east of the SATI property line, along the edge of the dock **(see Attachment 2)**. Franklin collected the sample from the ledge under the hatch using clean gloves and a plastic scoop to place the material into a new 32-ounce glass jar and closed the lid. The sample was gray LFM mixed with soil and bird feathers. I wrote identifying information on the label and then placed the label on the jar along with evidence tape over the lid. I photographed the sample where it was collected, and Franklin placed it into the ice chest.

IV. Laboratory Results and Waste Determination

A total of eight samples containing LFM, soil and debris were collected from the Pasha Terminal yard, including one near over the entrance to a storm drain, one from inside the storm drain vault, and one from a utility vault which is located on the edge of the dock, directly over the port waters. All samples had the characteristic of containing light fibrous materials, which is a waste stream uniquely generated by metal shredders. The presence of LFM directly adjacent and off-site from SATI indicates that this waste stream has migrated from SATI's metal shredding and material handling operations. The accumulations of LFM off-site illustrates improper management, and disposal of a hazardous waste from SATI. The laboratory results detailed below show all eight samples contained concentrations of heavy metals above the hazardous waste threshold for Toxicity.

All eight samples were analyzed using EPA-approved SW-846 Test Methods for Evaluating Solid Waste, Physical/Chemical Methods or the DTSC ECL-approved test

methods. Soluble metals were analyzed using the California Waste Extraction Test (WET) and the Toxicity Characteristic Leaching Procedure (TCLP). Total metals were analyzed using the California Total Threshold Limit Concentration (TTLC) analysis. Total and soluble mercury, and PCBs were also analyzed. The complete analytical laboratory reports are included as **Attachments 3 - 8, Analytical Laboratory Reports**.

Legal Citation(s):

California Code of Regulations, title 22, section 66261.24 (a)(2)(A). Characteristic of Toxicity

(a) A waste exhibits the characteristic of toxicity if representative samples of the waste have any of the following properties:

> (2) it contains a substance listed in subsection (a)(2)(A) or (a)(2)(B) of this section at a concentration in milligrams per liter of waste extract, as determined using the Waste Extraction (WET) described in Appendix II of this chapter, which equals or exceeds its listed soluble limit threshold concentration (STLC) or which equals or exceeds its listed total threshold limit concentration (TTLC).

Table 1. Summary of Sample Results

Sample ID	Sample Description; Photographs	Analytical Results (Results in Bold Exceed Hazardous Waste Threshold)
SATI-BF-01	Gray/brown soil & LFM collected from the top of a storm drain grate next to a chain-link fence separating areas of a storage yard. Attachment 1, Photos 4 & 5	Total Metals (mg/kg) Lead: 449 (TTLC: 1,000) Zinc: 4,810 (TTLC: 5,000) Soluble Metals (mg/L) **Lead: 30.0 (STLC: 5.0)** **Zinc: 398 (STLC: 250)** Cadmium: 0.538 (STLC: 1.0) Soluble Metals (TCLP) (mg/L) Lead: 0.302 mg/L (TCLP: 5.0 mg/L) Total Mercury (mg/kg): 0.752 (TTLC: 20) Soluble Mercury (mg/kg): Non-Detect (ND) PCBs (ug/kg): 870 ug/kg or 0.870 mg/kg (50 mg/kg)
SATI-BF-02	Gray/brown soil & LFM collected from the edge above the east truck wash channel at the south end. Attachment 1, Photos 6-8	Total Metals (mg/kg) **Lead: 1,100 (TTLC: 1,000)** **Zinc: 6,700 (TTLC: 5,000)** Soluble Metals (mg/L) **Lead: 79.5 (STLC: 5.0)** **Zinc: 590 (STLC: 250)** **Cadmium: 1.51 (STLC: 1.0)** Soluble Metals (TCLP) (mg/L) Lead: 0.494 (TCLP: 5.0) Total Mercury (mg/kg): 2.15 (TTLC: 20) Soluble Mercury (mg/kg): ND PCBs (ug/kg): 2,591 ug/kg or 2.591 mg/kg (50 mg/kg)

Sample ID	Sample Description; Photographs	Analytical Results (Results in Bold Exceed Hazardous Waste Threshold)
SATI-BF-03	Gray/brown soil & LFM collected from the floor of the west truck wash channel at the south end. Attachment 1, Photos 10-11	Total Metals (mg/kg) **Lead: 1,590 (TTLC: 1,000)** **Zinc: 11,900 (TTLC: 5,000)** Soluble Metals (mg/L) **Lead: 88.8 (STLC: 5.0)** **Zinc: 912 (STLC: 250)** **Cadmium: 2.26 (STLC: 1.0)** Soluble Metals (TCLP) (mg/L) Lead: 2.70 (TCLP: 5.0) Total Mercury (mg/kg): 4.96 (TTLC: 20) Soluble Mercury (mg/kg): 0.00414 (STLC: 0.2) PCBs (ug/kg): 3,090 ug/kg or 3.090 mg/kg (50 mg/kg)
SATI-BF-04	Gray/brown soil & LFM collected from the top corner of the walls inside a storm drain vault. Attachment 1, Photos 12-14	Total Metals (mg/kg) Lead: 850 (TTLC: 1,000) **Zinc: 7,450 (TTLC: 5,000)** Soluble Metals (mg/L) **Lead: 61.8 (STLC: 5.0)** **Zinc: 774 (STLC: 250)** **Cadmium: 1.04 (STLC: 1.0)** Soluble Metals (TCLP) (mg/L) Lead: 0.562 (TCLP: 5.0) Total Mercury (mg/kg): 7.58 (TTLC: 20) Soluble Mercury (mg/kg): ND PCBs (ug/kg): 2680 ug/kg or 2.680 mg/kg (50 mg/kg)

Sample ID	Sample Description; Photographs	Analytical Results (Results in Bold Exceed Hazardous Waste Threshold)
SATI-BF-05	Gray/brown soil & LFM collected from a large deposit just south of a chain-link enclosure around an old abandoned electrical utility box 50' from the SATI property line. Attachment 1, Photos 18-19	Total Metals (mg/kg) **Lead: 1,030 (TTLC: 1,000)** **Zinc: 8,150 (TTLC: 5,000)** Soluble Metals (mg/L) **Lead: 64.6 (STLC: 5.0)** **Zinc: 808 (STLC: 250)** **Cadmium: 1.62 (STLC: 1.0)** Soluble Metals (TCLP) (mg/L) Lead: 0.676 (TCLP: 5.0) Total Mercury (mg/kg): 4.13 (TTLC: 20) Soluble Mercury (mg/kg): ND PCBs (ug/kg): 2810 ug/kg or 2.810 mg/kg (50 mg/kg)
SATI-BF-06	Gray/brown soil & LFM collected from the truck wash channel east of the abandoned electrical utility box. Attachment 1, Photos 21-23	Total Metals (mg/kg) **Lead: 1,250 (TTLC: 1,000)** **Zinc: 9,850 (TTLC: 5,000)** Soluble Metals (mg/L) **Lead: 70.0 (STLC: 5.0)** **Zinc: 820 (STLC: 250)** **Cadmium: 1.80 (STLC: 1.0)** Soluble Metals (TCLP) (mg/L) Lead: ND (TCLP: 5.0) Total Mercury (mg/kg): 5.43 (TTLC: 20) Soluble Mercury (mg/kg): 0.00446 (STLC: 0.2) PCBs (ug/kg): 2960 ug/kg or 2.960 mg/kg (50 mg/kg)

Sample ID	Sample Description; Photographs	Analytical Results (Results in Bold Exceed Hazardous Waste Threshold)
SATI-BF-07	Gray/brown soil & LFM collected from a crack between a railroad rail and the pavement northeast of the abandoned electrical utility box. Attachment 1, Photos 24-26	Total Metals (mg/kg) **Lead: 1,220 (TTLC: 1,000)** **Zinc: 9,550 (TTLC: 5,000)** Soluble Metals (mg/L) **Lead: 76.2 (STLC: 5.0)** **Zinc: 926 (STLC: 250)** **Cadmium: 1.91 (STLC: 1.0)** Soluble Metals (TCLP) (mg/L) Lead: 0.218 (TCLP: 5.0) Total Mercury (mg/kg): 5.19 (TTLC: 20) Soluble Mercury (mg/kg): ND PCBs (ug/kg): 2,345 ug/kg or 2.345 mg/kg (50 mg/kg)
SATI-BF-08	Gray/brown soil & LFM collected from an accumulation of LFM on a ledge under the hatch hinges inside a utility vault, housing potable water valves. This vault was at the edge of the dock, above the water, and approximately 220' from the SATI property line. Attachment 1, Photos 29-33	Total Metals (mg/kg) Lead: 250 (TTLC: 1,000) Zinc: 2,450 (TTLC: 5,000) Soluble Metals (mg/L) **Lead: 10.1 (STLC: 5.0)** **Zinc: 262 (STLC: 250)** Cadmium: ND (STLC: 1.0) Soluble Metals (TCLP) (mg/L) Lead: ND (TCLP: 5.0) Total Mercury (mg/kg): 0.902 (TTLC: 20) Soluble Mercury (mg/kg): ND PCBs (ug/kg): ND (50 mg/kg)

V. Violations

See Summary of Violations and cover letter **(Attachment 9)**.

VI. List of Attachments

1. Photographic Log – 34 pages
2. Sample Location Map – One page
3. Lab Analysis Report -- STLC Metals – 16 pages
4. Lab Analysis Report – TTLC Metals – 23 pages
5. Lab Analysis Report – TCLP Metals – 18 pages
6. Lab Analysis Report – PCBs – 22 pages
7. Lab Analysis Report – TTLC Mercury – 16 pages
8. Lab Analysis Report – STLC Mercury – 15 pages
9. Summary of Violations and Cover Letter – Six pages

VII. Signatures

Larry Stuck

9/30/21

Larry Stuck
Senior Environmental Scientist (Specialist)
Office of Criminal Investigations

Date Signed

Richard L. Jones Digitally signed by Richard L. Jones
Date: 2021.09.30 18:17:11 -07'00'

Richard L. Jones
Senior Environmental Scientist (Supervisor)
Office of Criminal Investigations

Date Signed

Off-Site LFM Interim Cleanup and Sampling Results Memorandum
901 New Dock Street
Terminal Island, California 90731

ATTACHMENT B

Health and Safety Plan

GSI ENVIRONMENTAL INC.

SITE-SPECIFIC HEALTH AND SAFETY PLAN

SA Terminal Island

701 New Dock Street, Terminal Island, CA 90731

GSI Job No.:	6013	Revision No.:	1
Plan Prepared By:	Josh Voss & Don Kubik	Date:	12/02/2021
Plan Reviewed By:	Timothy Wood	Date:	12/02/2021
Plan Approved By:	Don Kubik	Date:	12/02/2021

ACKNOWLEDGEMENT

I, the undersigned, have been provided with a copy of this Site-Specific Health and Safety Plan. I have read the Plan, have attended a project safety orientation session conducted by GSI Environmental Inc. (GSI), and have had the opportunity to ask questions about health and safety issues relating to this project. I understand that it is my responsibility to abide by this Plan, and that physical injury, damage and other harm to myself or others could result from my failure to do so.

Name & Company (please print)	Signature	Date

1.0 SCOPE AND APPLICATION

This Site-Specific Health and Safety Plan (SS-HASP) has been prepared in accordance with 29 CFR §1910.120, 8 CCR 5192 and is a Site-specific supplement to the GSI company Environmental, Health and Safety (EHS) Program Manual for Field Operations (the "EHS Program Manual"), which specifies GSI's general health and safety policies and procedures. This SS-HASP is to be provided to all Site workers under the direction of GSI for their review. In addition, this SS-HASP, the GSI EHS Program Manual, and applicable client safety guidelines will remain on-Site at all times during the project, and will be available to all project personnel upon request from the GSI Site Safety Officer (SSO) or other designated representative.

This SS-HASP specifies health and safety protocol to be followed during implementation of the project work scope by all site personnel under the direction of GSI, including employees and subcontractors. In the event of conflicting standards between this plan or the GSI EHS Program Manual and client health and safety requirements, the more protective standard shall apply. All personnel are required to comply with this SS-HASP and to indicate their agreement to do so by signing the cover page.

2.0 PROJECT DESCRIPTION

2.1 General Information

Client/Site Owner	SA Recycling LLC (SAR)
Project Name and General Description	SA Terminal Island – Light Fibrous Material (LFM) Investigation and Removal
Project Location (Physical Address)	0.5-mile radius of 901 New Dock Street, Terminal, Island, CA 9073 (Figure 1)
Detailed Location Information	The Site occupied by a Pasha Stevedoring & Terminals, LP (PST) facility located at 701 New Dock Street in Terminal Island, California and other nearby properties. The PST facility is located adjacent to the east of SAR's Terminal Island scrap metal shredding and recycling facility.
Start Date/Duration/ Other Schedule Info.	LFM Investigation: 8 November 2021 starting at 7am. LFM Removal following investigation completion.

2.2 Site Description: Provide site description / attach site plan

The Site area is primarily occupied by a PST facility. The California Department of Toxic Substances Control (DTSC) recently collected samples containing LFM at the PST facility, the results of which are presented in DTSC's 1 October 2021 Sampling Report. DTSC's sampling and analysis identified elevated concentrations of some metals in the samples, and polychlorinated biphenyls (PCBs) in the majority of the samples.

In summary, the concentration of zinc exceeded its Total Threshold Limit Concentration (TTLC) of 5,000 milligrams per kilogram (mg/kg) in six (6) of the eight (8) samples (maximum reported concentration of 11,900 mg/kg in SATI-BF-03) and lead exceeded its TTLC of 1,000 mg/kg in 5 of the 8 samples (maximum reported concentration of 1,590 mg/kg in SATI-BF-03). None of the samples collected exceed the TTLC for cadmium. Soluble metals analysis reported lead and

zinc concentrations above their STLCs in each of the 8 samples and cadmium above its STLC in 6 of the 8 samples. No samples exceeded their TCLP limits. PCBs were reported in 7 of the 8 samples at concentrations between 0.87 and 3.09 mg/kg; PCBs were not detected in sample SATI-BF-08.

On 6 October 2021, GSI, SAR, and PST personnel performed a reconnaissance of the western and northern portions of the PST facility to observe DTSC's eight sampling locations, and assess the presence and nature of LFM at those locations and surrounding areas. GSI also collected co-located samples to those collected by DTSC.

GSI primary samples PT01 through PT08, companion samples to DTSC samples SATI-BF-01 through SATI-BF-08, appeared to contain LFM and had concentrations of cadmium, lead, and zinc at generally similar concentrations and relative distribution to DTSC sample analysis.

2.3 Project Tasks: Outline major tasks, attach detailed workplan and/or operating procedures

The project tasks will include the following:

LFM Inspection: GSI will perform reconnaissance of surrounding properties where access is provided to inspect for the presence of LFM.

LFM Removal: Innovative Construction Solutions (ICS; subcontractor to GSI) and/or SAR personnel will perform the removal of LFM. The material will be carefully removed using a combination of hand tools (e.g shovels and brooms) and vacuums. GSI will be on-Site to provide oversight of the removal activities.

Waste Disposal: Waste materials will be containerized and characterized for disposal at an authorized off-Site facility in accordance with applicable local and federal regulations. GSI will assist the client to coordinate disposal of waste at an appropriate facility.

3.0 EMERGENCY RESPONSE PROCEDURES

Specify emergency reporting contact. Provide Plant Emergency Response Contact with phone number(s) where applicable. Call 911 for emergencies located elsewhere.

Report all accidents immediately to:

Timothy Wood (GSI Environmental): (949) 283-5696
Vinnie Robino (GSI Environmental): (949) 422-8586
Jeff Farano (Client Contact – SA Recycling LLC): (714) 471-4411

Describe plant siren/ alarm signals, if applicable, and response

No Site-specific training is necessary on-Site. The Site does not have any specific alarm signals

Location of emergency assembly area(s) and evacuation route

In case of an emergency, assemble near the entrance to of the PST facility.

Describe other applicable emergency response measures to be taken (decontamination and/or medical treatment)

In case of an emergency, call 911

Location and phone number of nearest urgent care facility (Map Attached; Figure 2)

The nearest urgent care facility is the **Concentra Urgent Care**, 3.1 mile from the Site (approximately 7-minute drive time, dependent on traffic). Directions to the urgent care are as follows:

1. Head east on New Dock St
2. Turn right onto Pier S Ave
3. Pier S Ave turns left and becomes CA-47 N
4. Use the 2nd from the right lane to take the ramp to I-710 N
5. Keep left at the fork and merge onto I-710 N
6. Take exit 1E toward Downtime
7. Continue on W Ocean Blvd
8. Turn right onto World Trade Center and the destination will be on the left.

Concentra Urgent Care
100 Oceangate P245
Long Beach, CA 90802

Phone
Phone number: (562) 432-2821

Hours
Monday through Friday – 7AM to 6PM
Saturday & Sunday – Closed

Refer to Figure 2 – Urgent Care Location Map.

Location and phone number of nearest hospital with emergency room (Map attached; Figure 3)

The nearest hospital with an emergency room is the **Dignity Health – St. Mary Medical Center**, 4.7 miles from the site (approximately 16-minute drive time, dependent on traffic). Directions to the hospital are as follows:

1. Head east on New Dock St
2. Turn right onto Pier S Ave
3. Pier S Ave turns left and becomes CA-47 N
4. Use the 2nd from the right lane to take the ramp to I-710 N
5. Keep left at the fork and merge onto I-710 N
6. Take exit 1E toward Downtime
7. Continue on W Ocean Blvd
8. Turn left onto Long Beach Blvd
9. Turn right onto E 10th St
10. Turn left onto Elm Ave
11. Turn right onto Linden Ave and the destination will be on the right.

Dignity Health – St. Mary Medical Center
1050 Linden Ave
Long Beach, CA 90813

Phone
Emergency Center (562) 491-9000
Hospital Information (562) 491-9000

Refer to Figure 3 – Hospital Location Map.

4.0 Project Organization, Personnel, & Training Requirements

4.1 Key Personnel

Position	Name	Phone (Cell Phone)
GSI Principal-in-Charge (PIC)	Timothy Wood, PG, CHG	(949) 679-1070 (949) 283-5696 (cell)
GSI Project Team Leader (PTL)	Vinnie Robino, PG	(949) 679-1070 (949) 422-8586 (cell)
GSI Site-Safety Officer (SSO)	Bianca Mintz	(808) 561-0775 (cell)
GSI SoCal H&S Representative	Josh Voss	(815) 451-1369 (cell)
GSI Certified Industrial Hygienist	Don Kubik Jr., PG, CIH, CIT	(815) 451-1369 (cell)
Client Contact	Jeff Farano Sr.	(714) 471-4411 (cell)
Site Contact	Todd Peterson	(360) 556-8530 (cell)
ICS Project Manager	John White	(714) 240-1229 (cell)

4.2 Training Requirements – Check all that apply and list any additional

X	OSHA 40-hr HAZWOPER	X	OSHA 8-hr Annual Refresher
	Contractor Safety Council (CSC) – Basic +		TWIC Card
	Site-Specific (CSC or on-site)		
	Unit-Specific		

4.3 Requirements for Respirator Use

Will respirator use potentially be required? X_____Yes _____No

If yes, GSI Respiratory Protection Plan, found in Section 6.0 of the GSI HASP, is applicable. Affected personnel must have physician's written opinion certifying fitness to use respirator based on pulmonary function test and other considerations, be trained in proper respirator use, and have quantitative fit test.

4.4 Personnel Documents

All field project personnel, including subcontractors, are to maintain training and medical records at their respective offices and provide to GSI if requested. OSHA 40-hour HAZWOPER training with 8-hour refresher courses is required of all field personnel.

5.0 POTENTIAL HAZARDS & HAZARD CONTROL MEASURES

5.1 General Site Access Control

The work zone will be kept clear of unnecessary materials. If necessary, caution tape will be put around the work areas to demarcate an area where unauthorized personnel are not allowed to enter. The GSI Site Safety Officer will be responsible for preventing unauthorized persons from entering the work area when on-Site.

5.2 Project Personnel Access Control

Sign in and out with the GSI Site Safety Officer.

5.3 Underground Utilities Clearance

Specify procedures for obtaining clearance of locations for drilling, excavation, or other subsurface penetrations. Utility clearance will include at least a 48-hour notification to Underground Service Alert (USA) of California, the state underground utility notification authority. Below are the color designations to be used by the underground utilities surveyor.

WHITE – PROPOSED EXCAVATION

PINK – TEMPORARY SURVEY MARKINGS

RED – ELECTRIC POWER LINES, CABLES, CONDUIT AND LIGHTING CABLES

YELLOW – GAS, OIL, STEAM, PETROLEUM OR GASEOUS MATERIALS

ORANGE – COMMUNICATION, ALARM OR SIGNAL LINES, CABLES OR CONDUIT

BLUE – POTABLE WATER

PURPLE – RECLAIMED WATER, IRRIGATION AND SLURRY LINES

GREEN – SEWERS AND DRAIN LINES

5.4 General Work Hazards and Avoidance

General work hazards include slip, trip, and fall hazards, head or foot injuries from falling or dropped objects, strains from over-exertion or incorrect lifting, electrical shocks, etc. These hazards can be controlled by good housekeeping measures and safe work practices, as outlined below. See also GSI HASP.

Housekeeping Measures:

- Excess brush or high vegetation should be cleared from the work area to the extent practical prior to start of the job.
- The job Site must be kept clean and free of trash and debris. Trash will be placed in bags or other suitable containers when generated. Disposable PPE must be disposed in designated containers upon removal.
- Materials such as lumber, cement, etc. will be neatly stored in a designated area.
- Tools and equipment must be returned to the tool box or designated area when no longer in use.

General Safe Work Practices:

- Use buddy system.
- Stay alert at all time to activities in your surroundings. Watch for on-coming vehicles, other workers, and overhead hazards.
- Work at a deliberate pace; do not rush a job.
- Avoid heavy lifting and lift with knees bent.
- Use tools only for their intended use, and make sure tools are in good condition. Inspect power tool and extension cords prior to use.
- Maintain safe distance (at least 10 feet and an additional 4 inches for every 10 kilovolts (kV) over 50 kV) between drill rig mast or other overhead equipment and overhead lines.
- Avoid unauthorized entry to restricted areas including confined space areas.
- Do not operate plant process equipment; do not open or close valves

- Proper PPE (specified below) must be worn at all times. PPE must be inspected regularly and properly maintained.
- Remove gloves and wash hands before handling food or tobacco products.

5.5 Fire and Explosion Hazard Mitigation

- Gasoline and other fuels must be stored in steel safety cans with mesh flame arresters and spring-mounted relief vent mechanisms. Flammable and combustible materials including paints and solvents must be properly stored away from sources of ignition.
- Fire extinguishers must be present on all vehicles, and drilling and excavation equipment, and in all areas where spark producing equipment is in use.

Other Measures (check as applicable):

_X_ Smoking permitted only in designated areas, or
____ Smoking not permitted
____ Matches and lighters not permitted onsite
____ Hot-work permits must be obtained for spark-producing equipment in designated areas
____ Other _____

5.6 Heat-Related Disorders

The major varieties of heat-related disorders, their related symptoms and appropriate treatment are listed below in order of increasing severity.

Condition & Related Symptoms	Heat Stress	Heat Exhaustion or Heat Syncope	Heat Stroke
Cramping	May be present	May be present	Absent
Mental State	Faint, dizzy, fatigue	May be disoriented	Stupor or coma
Skin & Complexion	Cool, moist, flush; rash may be present.	Cool, pale, moist	Red, hot, dry
Temperature	Normal	Normal to low	Very high (>105° F)
Pulse	Rapid (>110 beat /min)	Rapid, weak	Rapid, bounding
Blood Pressure	May be low	May be low	May be high in early stages
Treatment	Give water & electrolytes, loosen or remove clothing, move to shade	Give water & electrolytes, loosen or remove clothing, move to shade	Provide rapid cooling by immersion; cover in wet cloth and transport to emergency room

Prevention Measures: All heat disorders are caused by loss of fluids and the body's inability to cool itself. Heat stress can be prevented by the following measures:

- Pre-hydrate before going into the field: water or water-electrolyte drinks are preferable to caffeinated beverages or soft drinks. Refrain from alcohol the night before field work.
- In the field drink frequently. Numerous small drinks at a tepid temperature are better than rapid, large volume intakes of iced drinks.
- Rest at least a few minutes every hour or two.
- Observe co-workers for signs of heat stress.

OSHA identifies the following Risk Levels for given values of the heat index and recommends increasing Protective Measures to be implemented at each level.

Heat Index	Risk Level	Protective Measures
< 91° F	Lower (Caution)	Basic heat safety and planning
91° to 103° F	Moderate	Implement precautions and heighten awareness
103° to 115° F	High	Additional precautions to protect workers
> 115° F	Very High to Extreme	Aggressive measures (e.g., reschedule non-essential work)

5.7 Heavy Equipment Operations

During removal activities, heavy equipment must be in good condition, if used. Particular attention should be paid to the condition of cables and hoisting equipment. The equipment must be equipped with a back-up beeper. Barricades or caution tape should be used as needed to exclude unauthorized personnel from the work area.

During removal activities, equipment should be positioned to allow for adequate work room and the area kept free of trip and slip hazards. Care must be taken to avoid the catching of loose clothing in moving parts, and to keep hands free of pinch points. Proper PPE including hard hat, safety glasses, gloves, hearing protection, and safety shoes must be worn.

All vehicles or mechanical equipment that may have all or parts of its structure near energized overhead lines should maintain an operating distance of at least 10 feet of clearance with distance increased by 4 inches for every 10 kV over 50kV.

All heavy equipment must employ the warning methods while the vehicle is backing up, as described in 8 CCR 1592, including:

- Automatic back-up alarm;
- Automatic braking device;
- A spotter directing the vehicle;
- Inspection of the entire perimeter of the vehicle prior to backing up; and/or
- Prohibiting foot traffic in the work area.

5.8 Confined Space and Excavation Safety

All personnel must obey all posted restrictions on entry to confined spaces. Excavations deeper than 4 ft should not be entered for any purpose unless 1) the excavation walls are properly shored or are sloped at a 1:1 slope, or less steep, and there is no danger of collapse or engulfment; 2) a suitable means of egress such as ramp, stairs or ladder is located so as to require no more than 25 ft of lateral travel to reach it; and 3) testing demonstrates a hazardous atmosphere is not present.

5.9 Potential Chemical Exposure Hazards

Chemicals of potential concern (COPCs) are potential chemical exposure hazards that field personnel should be aware of removal and are discussed in Section 2.2. Based on previous sampling results for samples collected by DTSC and GSI, PCBs, cadmium, lead, and zinc are considered COPCs.

The table below summarizes primary COPCs, and the maximum expected concentrations in soil and/or water, to the extent known. NIOSH Pocket Guide printouts are provided in Attachment 2.

Constituents of Concern (COCs)	Exposure Limits[1]			I.P.	Max. Expected Concentration or Free-Phase (FP)		Health Hazard Target Organ Route of Entry
Chemical Name/ CAS No.	**PEL/ TLV (mg/m^3)**	**STEL (mg/m^3)**	**IDLH[2] (mg/m^3)**	**(e.V)**	**Soil (mg/kg)**	**Water (mg/L)**	Ca = Carcinogen Abs = Skin Absorption Con = Skin or Eye Contact Inh = Inhalation Ing = Ingestion
Cadmium [7440-43-9]	0.005	NA[3]	50	NPV[4]	29	UNK[5]	Inh, Ing
Lead [7439-92-1]	0.050	NA	100	NPV	1,590	UNK	Inh, Ing, Con
Zinc [1314-13-2]	5	NA	500	NPV	11,900	UNK	Inh
PCBs [53469-21-9]	1	NA	10	NPV	1.93	UNK	Ca, Inh, Ing, Abs, Con

1 Unless otherwise noted, Permissible Exposure Limits (PEL) and Threshold Limit Values (TLVs) are permissible time-weighted average exposure limits (ppm in air), which must not be exceeded for an 8-hour work-day/40-hour work week. Short-Term Exposure Limits (STELs) must not be exceeded over a 15-minute period.
2 IDLH = Immediately Dangerous to Life or Health; must not be exceeded at any time.
3 NA = Not available or not applicable
4 NPV = No published value
5 UNK = Unknown
6 Exposure limits and associated health hazards can be found in the NIOSH Pocket Guide to Chemical Hazards and the ACGIH Guide to TLVs and BEIs.

The following equation can be used to estimate an 8-hour maximum hypothetical time weighted average concentration of COPCs in air.

$$\text{Dust AL(for one dust)} = EL/(\ COPC_{LFM}\ \times SF \times 10^{-6}\ (kg/mg))$$

$$\text{Dust AL (for mixed dusts)} = (10^{-6}\ (kg/mg)/SF)\ /\text{Sum of}\ (\ COPC_{LFM}\ /EL)$$

where:
Dust AL = dust action level [mg/m_3]
EL = exposure limit (Cal/OSHA PEL) [mg/m^3]
SF = safety factor of 1 [unitless]
$COPC_{LFM}$ = representative COPC concentration in LFM [mg/kg]

Using the maximum concentrations in the table above, airborne concentrations of the LFM would need to be in excess of 25 mg/m^3 to reach the PELs of the COPCs.
Based on this information, maintaining dust levels below the Cal/OSHA PELs for particulates (10 mg/m^3 for total dust and 5 mg/m^3 for respirable fraction) would keep workers well under the Cal/OSHA regulatory enforceable PEL for the COPCs.

To minimize potential chemical exposure, the following measures will be taken:

- SDS must be provided for any chemical brought on-site for project use.
- Workers should remain upwind of contaminated materials to the extent practical.
- PPE specified below will be worn prevent skin or eye contact with constituents.
- Air quality monitoring will be conducted and respiratory protective equipment used as needed, as described below.
- Eating, drinking, smoking, gum chewing and oral tobacco use are not permitted in areas where chemical exposure could occur.

- Workers must remove gloves in the work area and drink from a water source outside the immediate work zone.
- PPE must be removed and hands thoroughly washed prior to breaking for meals.

5.10 Other Potential Hazards

During removal activities, make sure proper PPE (level D) is worn (hard hat, steel-toe boots with appropriate traction, safety glasses, gloves, ear protection). A N95 particulate mask should be worn as well during removal activities. Be careful when moving around heavy equipment. To prevent heat-related illness, take frequent breaks and drink plenty of fluids throughout the day.

Dust may be generated during removal activities. Dust control measures will be implemented to minimize dust generation. General dust control measures will include:

- sprinkling water to maintain soil moisture during removal and loading activities;
- covering all containers with soil;
- sweeping work areas if visible soil material is present;
- restricting non-essential traffic in the project area;
- minimizing drop heights while loading containers; and
- covering exposed affected soil or stockpiles with secured plastic sheeting.

COVID-19

Due to the outbreak of the novel Coronavirus Disease 2019 (COVID-19), GSI's Pandemic Disease Plan (Addendum) will be implemented for GSI employees and subcontractors (Attachment 3). Please review to the Addendum appended to the GSI Employee Procedures Handbook: Appendix H and attached to this SS-HASP. GSI field staff will review the COVID-19 Addendum before field work begins each day at the daily tail-gate meeting. Below is a list of Site-specific COVID-19 guidance:

- There are no Site-specific COVID-19 screening requirements. GSI staff will be traveling to and from the Site in separate vehicles.
- Face masks may be required to be worn in California when social distancing (separation of 6 feet or more) is not attainable and therefore GSI staff and subcontractors should wear face coverings when within 6 feet of other field personnel.
- Each GSI and subcontractor personnel are required to bring their own face covering such as cloth masks to the Site.

6.0 AIR QUALITY MONITORING

Dust monitoring will initially be conducted to verify that dust concentrations are below the Cal/OSHA PELs for total and respirable particulates and that N95 particulate masks provide adequate respiratory protection. Monitoring will be conducted using a portable dust monitor such as a TSI DUSTTRAK Aerosol monitor. Field personnel will perform dust monitoring during initial LFM cleanup activities, which will begin in the western portion of the PST facility, closest to the SATI facility where LFM deposits have been observed. Initial dust monitoring will be performed in the breathing zone during LFM removal actions. The Site Safety Officer will verify that all instruments are operating correctly before they are brought to the Site. Background dust measurements will be collected at the start of the work period and at least once later during work activities, preferably upwind from the work area. Based on initial dust monitoring, dust control measures and the respirator protection program will be adjusted, if necessary.

7.0 PERSONAL PROTECTIVE EQUIPMENT (PPE)

7.1 Level D PPE

A minimum of Level D PPE is required for all site personnel at all times, upgraded as necessary depending on task and conditions. Basic Level D PPE shall include the following elements: **1)Hard Hat** (w/ mono goggles); **2)Safety Glasses** (w/side shields); **3)Safety Shoes** (w/steel toes); **4)Body Covering** (long pants, shirt w/ sleeves, collar). Basic Level D equipment will be supplemented as follows:

7.2 Supplemental Level D PPE

	Item	**When/Where to be Used**
	Flame Retardant Clothing (FRC)	
X	Hearing Protection	Around heavy machinery
X	Work gloves	When using hand tools
	Latex or vinyl surgical gloves	
X	Neoprene or Nitrile gloves	When handling or removing LFM
X	Tyvek Coveralls	Have available if needed
	Polycoat Tyvek Coveralls	
	Chemical-resistant boots	
	Face Shield	
X	Face Coverings (COVID-19 related)	As required by State or County guidelines
X	N95 facepiece respirators	During LFM removal operations

During LFM removal operations, NIOSH-approved N95 particulate filtering facepiece respirators will be worn in accordance with GSI's or the respective contractor's Respiratory Protection Program. If particulate monitoring indicates that exposure to particulates is below the PELs, this requirement may be modified by the Site Safety Officer.

8.0 DECONTAMINATION PROTOCOL

Specify procedures for personnel decontamination and management of disposable PPE.

Personal Decontamination: Wash hands thoroughly before leaving the Site or eating. Disposable PPE (e.g. nitrile gloves) will be disposed in trash bags and disposed appropriately.

Equipment Decontamination: Disposable equipment (gloves, etc.) will be disposed appropriately. Removal equipment will be decontaminated by subcontractor, as needed. Reusable equipment will be decontaminated using a solution of laboratory-grade detergent (such as Alconox) and potable water and rinsed with potable water. Investigation derived waste (i.e., tubing, paper towels, etc.) will be placed in trash bags, and disposed according to state and local regulations. Additionally, visqueen or plastic sheeting will be laid down in the work area to help prevent cross decontamination and keep the work area clean.

Specify procedures for response to non-emergency chemical release.

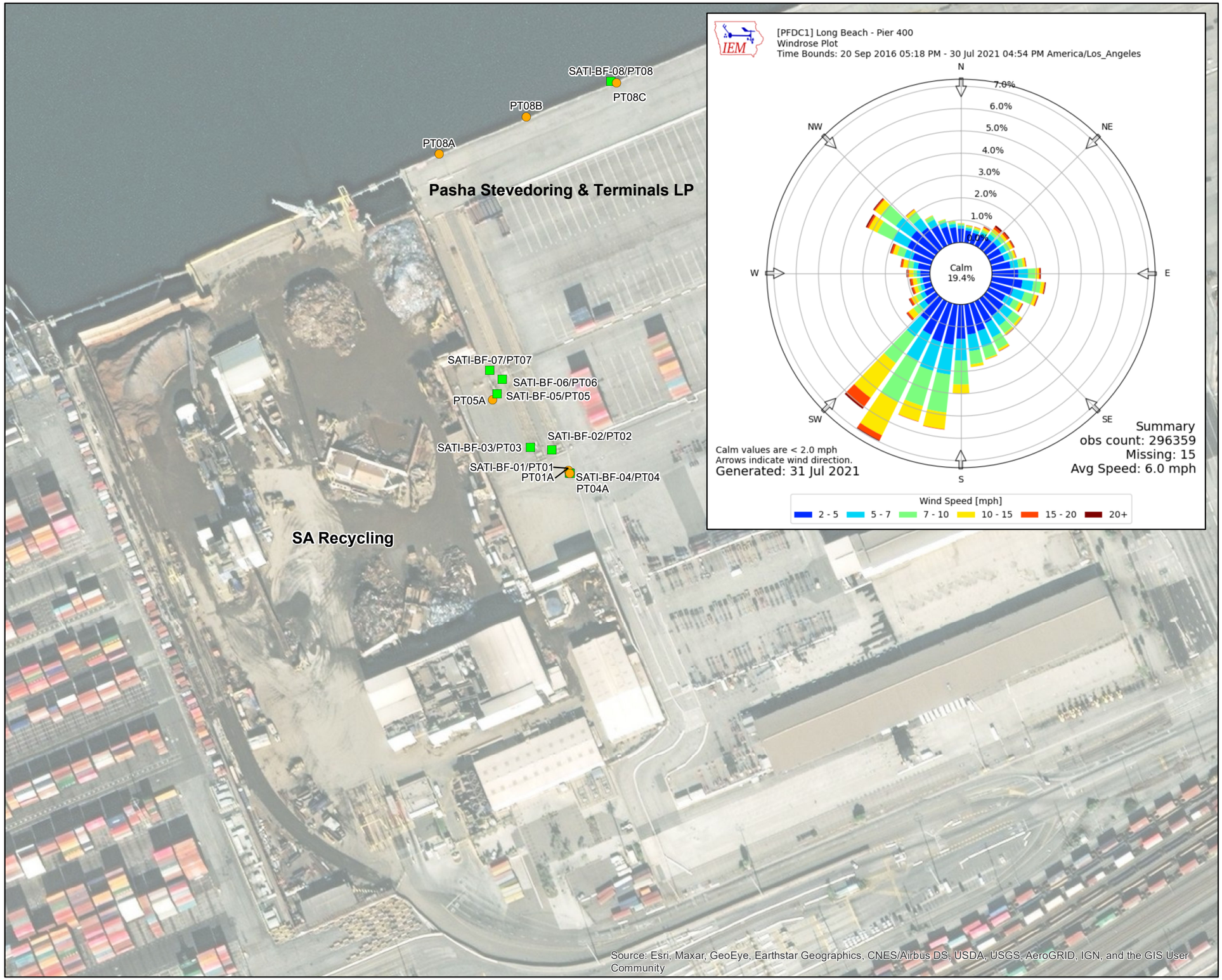
Although a non-emergency chemical release is not anticipated for this job, if one occurs, work will stop immediately, and the chemical will be cleaned up with rags or an appropriate absorbent material and disposed of in the IDW drum or separate drum as appropriate. Additionally, the SSO will contact the GSI Health & Safety Coordinator.

9.0 ADDITIONAL INFORMATION

Provide any additional information, procedures, or instructions as needed.

GSI will conduct a review of the site-specific Health and Safety Plan with subcontractors and other personnel on-Site before the project is started. The SSO will record items discussed on the Daily Site Safety Record (Attachment 1). As a means of tracking attendance, all site personnel are expected to review and sign the HASP. The SSO will track on-Site / off-Site times on the Daily Site Safety Record. After lunch each day, GSI will hold a brief meeting to discuss any safety issues encountered during the morning hours that needs to be addressed in the afternoon, and to refresh all field personnel on the safety issues associated with the project tasks.

At the conclusion of each workday, the SSO will complete the Daily Site Safety Record form (Attachment 1).



N

LEGEND

- Sample Location (GSI, October 6, 2021)
- Sample Location (DTSC, September 1, 2021)

Notes

1) Aerial imagery provided by Esri ArcGIS Online, November 2020.
2) Windrose plot downloaded from: https://mesonet.agron.iastate.edu/sites/windrose.phtml?station=PFDC1&network=CA_DCP, on October 14, 2021.

Feet
0 100 200

Projected Coordinate System
Datum: NAD 83
State Plane California Zone V
Units: Feet

GSI ENVIRONMENTAL

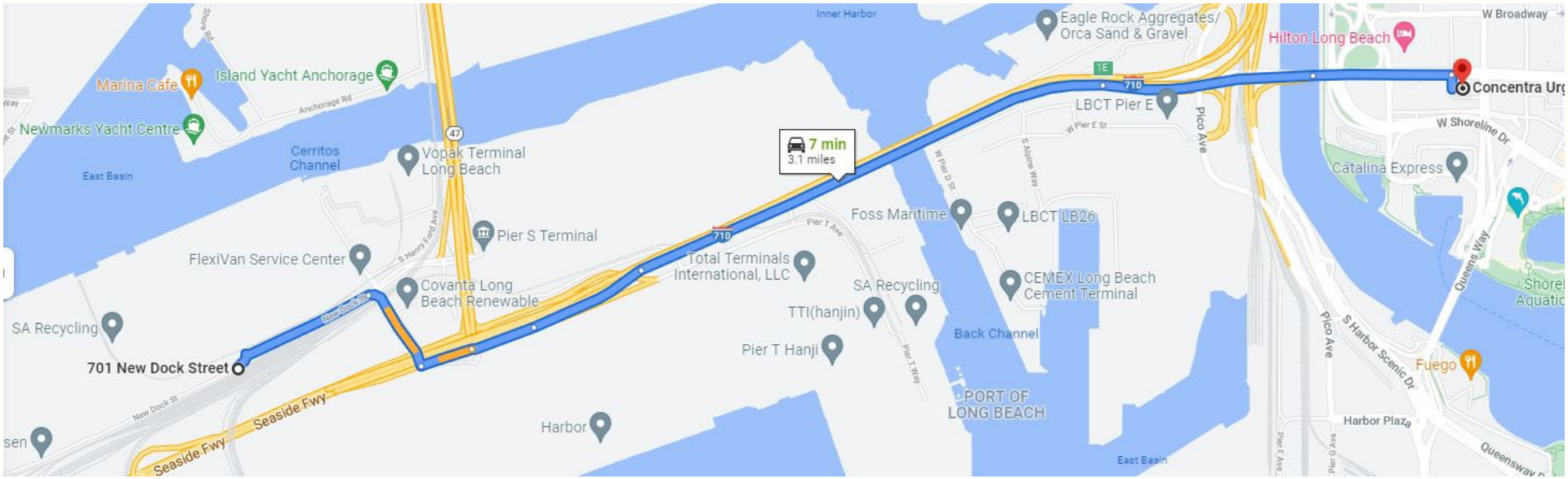
SAMPLE LOCATIONS & WIND SPEED AND DIRECTION

Pasha Stevedoring & Terminals LP
701 New Dock Street, San Pedro, California

GSI Job No.	6013	Drawn By:	AV
Issued:	14-Oct-2021	Chk'd By:	CH
Map ID:	SATI_SampLocsP400	Appv'd By:	TFW

FIGURE 1

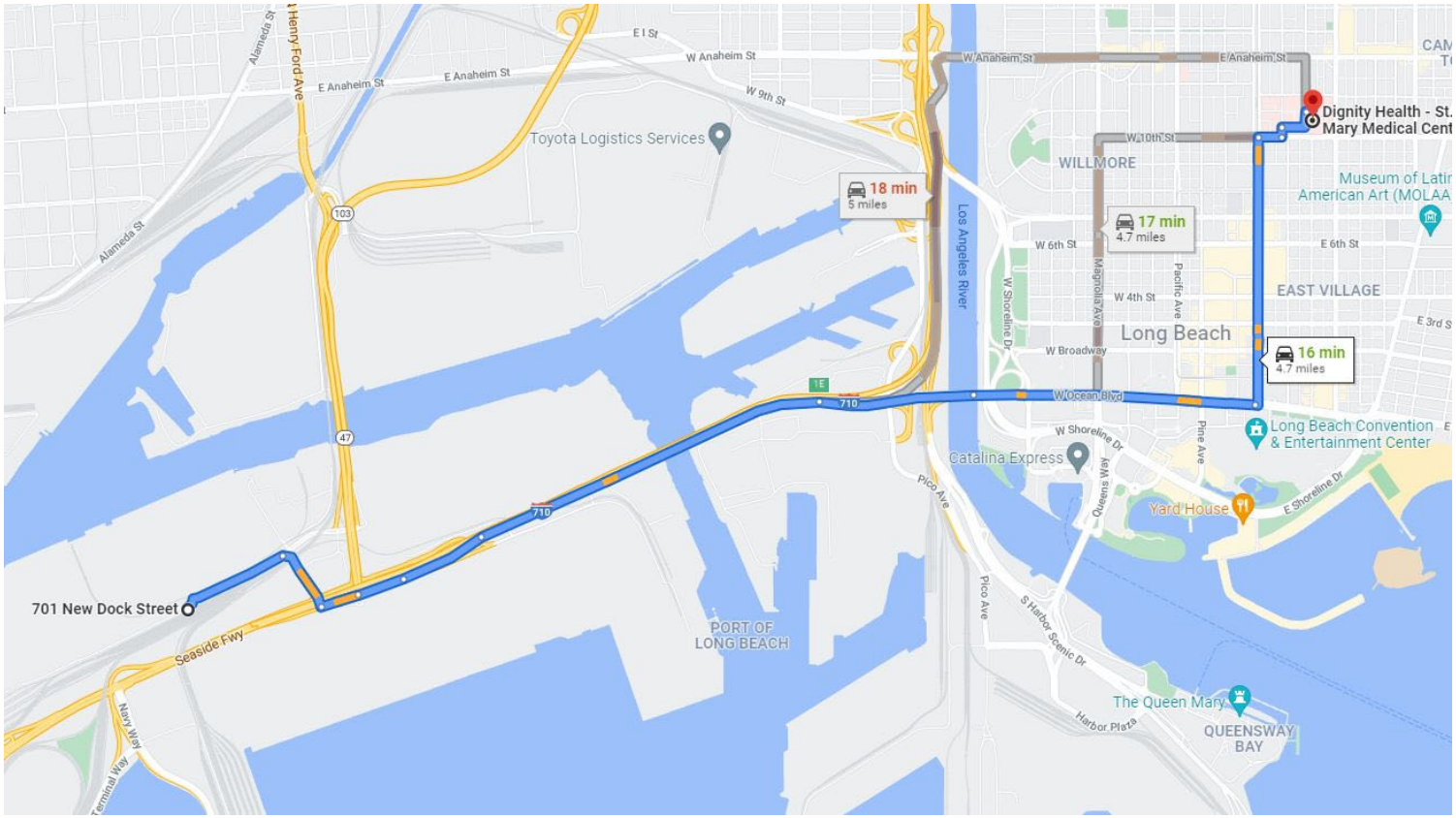
Collected via Google Maps:



1. Head east on New Dock St
2. Turn right onto Pier S Ave
3. Pier S Ave turns left and becomes CA-47 N
4. Use the 2nd from the right lane to take the ramp to I-710 N
5. Keep left at the fork and merge onto I-710 N
6. Take exit 1E toward Downtime
7. Continue on W Ocean Blvd
8. Turn right onto World Trade Center and the destination will be on the left.

GSI ENVIRONMENTAL	GSI Job No. 6013 Issued: 10/21/21 Revised: Scale: Not To Scale	Google.com/maps	FIGURE 2 URGENT CARE LOCATION MAP Concentra Urgent Care 100 Oceangate p245, Long Beach, CA 90802

Collected via Google Maps:



1. Head east on New Dock St
2. Turn right onto Pier S Ave
3. Pier S Ave turns left and becomes CA-47 N
4. Use the 2nd from the right lane to take the ramp to I-710 N
5. Keep left at the fork and merge onto I-710 N
6. Take exit 1E toward Downtime
7. Continue on W Ocean Blvd
8. Turn left onto Long Beach Blvd
9. Turn right onto E 10th St
10. Turn left onto Elm Ave
11. Turn right onto Linden Ave and the destination will be on the right.

GSI ENVIRONMENTAL	GSI Job No. 6013 Issued: 10/21/21 Revised: Scale: Not To Scale	Google.com/maps	FIGURE 3 HOSPITAL LOCATION MAP Dignity Health – St. Mary Medical Center 1050 Linden Ave, Long Beach, CA 90813

GSI ENVIRONMENTAL INC.

DAILY TAILGATE SAFETY MEETING

Project/Location: _____ GSI Job No._____

_____ Page 1 of 1

Site Safety Officer:_____ Date: _____

Meeting Conducted By: _____

Meeting Attended By:

NAME	COMPANY	SIGNATURE

_____Additional Personnel (See Next Page)

Tasks to be Performed:

Potential Hazards and Hazard Avoidance Measures:

Mechanical Hazards:

Heat Stress:

Chemical Exposure:

Biological Hazards:

Other:

GSI ENVIRONMENTAL INC.

DAILY SITE SAFETY RECORD

Project: _____ GSI Job No.: _____

Location: _____ Date: _____

Page 1 of _____

Field Personnel:

Name	Company	Time Onsite-Offsite	Time Onsite-Offsite
1)			
2)			
3)			
4)			
5)			

_____Additional Personnel (Attach additional sheets as needed.)

Work Item/Personal Protective Equipment Level:

Task: _____ PPE: _____

Task: _____ PPE: _____

Task: _____ PPE: _____

Air Quality Monitoring: _____ Required (See record on next page.) _____ Not Required

Safety Awareness Issues Discussed: _____

_____

_____

Site Safety Officer: _____ Confirmation: *"I have visually inspected the site for proper housekeeping, absence of slip or trip hazards, etc."*

Signature: _____ Date: _____

HEAVY EQUIPMENT USE (IF APPLICABLE)

Type of Equipment & Model: _____ Owned: _____ Rented: _____

Certification: *"I have been properly trained on the use of this equipment. I have inspected this equipment and confirmed it to be in good working condition."*

Signature: _____ Date: _____

ACCIDENTS/INJURIES/INCIDENTS

(Description of incident and actions taken. Attach additional sheets as needed.)

_____

_____

GSI ENVIRONMENTAL INC.

DAILY SITE SAFETY RECORD

GSI Job No._____
Page 2 of_____
Date _____

Air Quality Monitoring:

_____Photo Ionizing Detector (PID)
Calibration Check:
(95 ppm Methane Gas)

_____Other (Specify) _____
10 X Scale Reading (ppm)_____
100 X Scale Reading (ppm)_____

Time	Activity	Sample Point	Reading* (ppm)

* Reading above background, sustained for 1 minute period.

Action Level _____ ppm Action Level Exceeded?_____

Action Taken _____

Remarks _____

Centers for Disease Control and Prevention

Promoting productive workplaces through safety and health research NIOSH

Synonyms & Trade Names

Cadmium metal

CAS No.

7440-43-9 (metal)

RTECS No.

EU9800000 (metal)

DOT ID & Guide

2570 154(cadmium compound)

Formula

Cd (metal)

Conversion

IDLH

Ca [9 mg/m^3 (as Cd)]
See: 7440439

Exposure Limits

NIOSH REL
Ca See Appendix A [*Note: The REL applies to all Cadmium compounds (as Cd).]
OSHA PEL
[1910.1027] TWA 0.005 mg/m^3 [*Note: The PEL applies to all Cadmium compounds (as Cd).]

Measurement Methods

NIOSH 7048 , 7300 , 7301 , 7303 , 9102;
OSHA ID121 , ID125G , ID189 , ID206
See: NMAM or OSHA Methods

Physical Description

Metal: Silver-white, blue-tinged lustrous, odorless solid.

Molecular Weight	Boiling Point	Melting Point	Solubility	Vapor Pressure	Ionization Potential
112.4	1409°F	610°F	Insoluble	0 mmHg (approx)	NA

Specific Gravity	Flash Point	Upper Explosive Limit	Lower Explosive Limit		
8.65 (metal)	NA	NA	NA		

Metal: Noncombustible Solid in bulk form, but will burn in powder form.

Incompatibilities & Reactivities

Strong oxidizers; elemental sulfur, selenium & tellurium

Exposure Routes

inhalation, ingestion

Symptoms

pulmonary edema, dyspnea (breathing difficulty), cough, chest tightness, substernal (occurring beneath the sternum) pain; headache; chills, muscle aches; nausea, vomiting, diarrhea; anosmia (loss of the sense of smell), emphysema, proteinuria, mild anemia; [potential occupational carcinogen]

Target Organs

respiratory system, kidneys, prostate, blood

Cancer Site

[prostatic & lung cancer]

Personal Protection/Sanitation

(See protection codes)
Skin: No recommendation
Eyes: No recommendation
Wash skin: Daily
Remove: No recommendation
Change: Daily

First Aid

(See procedures)
Eye: Irrigate immediately
Skin: Soap wash
Breathing: Respiratory support
Swallow: Medical attention immediately

Respirator Recommendations

(See Appendix E)

NIOSH

At concentrations above the NIOSH REL, or where there is no REL, at any detectable concentration:
(APF = 10,000) Any self-contained breathing apparatus that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode
(APF = 10,000) Any supplied-air respirator that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary self-contained positive-pressure breathing apparatus

Escape:

(APF = 50) Any air-purifying, full-facepiece respirator with an N100, R100, or P100 filter.
Click here for information on selection of N, R, or P filters.

Any appropriate escape-type, self-contained breathing apparatus

Important additional information about respirator selection

See also

INTRODUCTION ICSC CARD: 0020 MEDICAL TESTS: 0035

Page last reviewed: October 30, 2019

Centers for Disease Control and Prevention

Promoting productive workplaces through safety and health research NIOSH

Synonyms & Trade Names

Lead metal, Plumbum

CAS No.

7439-92-1

RTECS No.

OF7525000

DOT ID & Guide

Formula

Pb

Conversion

IDLH

100 mg/m^3 (as Pb)
See: 7439921

Exposure Limits

NIOSH REL
TWA (8-hour) 0.050 mg/m^3 See Appendix C [*Note: The REL also applies to other lead compounds (as Pb) -- see Appendix C.]
OSHA PEL
[1910.1025] TWA 0.050 mg/m^3 See Appendix C [*Note: The PEL also applies to other lead compounds (as Pb) -- see Appendix C.]

Measurement Methods

NIOSH 7082 , 7105 , 7300 , 7301 , 7303 , 7700 , 7701 , 7702 , 9100 , 9102 , 9105;
OSHA ID206 , ID121 , ID125G
See: NMAM or OSHA Methods

Physical Description

A heavy, ductile, soft, gray solid.

Molecular Weight	Boiling Point	Melting Point	Solubility	Vapor Pressure	Ionization Potential
207.2	3164°F	621°F	Insoluble	0 mmHg (approx)	NA

Specific Gravity	Flash Point	Upper Explosive Limit	Lower Explosive Limit		
11.34	NA	NA	NA		

Noncombustible Solid in bulk form.

Incompatibilities & Reactivities

Strong oxidizers, hydrogen peroxide, acids

Exposure Routes

inhalation, ingestion, skin and/or eye contact

Symptoms

lassitude (weakness, exhaustion), insomnia; facial pallor; anorexia, weight loss, malnutrition; constipation, abdominal pain, colic; anemia; gingival lead line; tremor; paralysis wrist, ankles; encephalopathy; kidney disease; irritation eyes; hypertension

Target Organs

Eyes, gastrointestinal tract, central nervous system, kidneys, blood, gingival tissue

Personal Protection/Sanitation

(See protection codes)
Skin: Prevent skin contact
Eyes: Prevent eye contact
Wash skin: Daily
Remove: When wet or contaminated
Change: Daily

First Aid

(See procedures)
Eye: Irrigate immediately
Skin: Soap flush promptly
Breathing: Respiratory support
Swallow: Medical attention immediately

Respirator Recommendations

(See Appendix E)
NIOSH/OSHA

Up to 0.5 mg/m^3:
(APF = 10) Any air-purifying respirator with an N100, R100, or P100 filter (including N100, R100, and P100 filtering facepieces) except quarter-mask respirators.
Click here for information on selection of N, R, or P filters.
(APF = 10) Any supplied-air respirator

Up to 1.25 mg/m^3:
(APF = 25) Any supplied-air respirator operated in a continuous-flow mode
(APF = 25) Any powered, air-purifying respirator with a high-efficiency particulate filter.

Up to 2.5 mg/m^3:

(APF = 50) Any air-purifying, full-facepiece respirator with an N100, R100, or P100 filter.
Click here for information on selection of N, R, or P filters.

(APF = 50) Any supplied-air respirator that has a tight-fitting facepiece and is operated in a continuous-flow mode
(APF = 50) Any powered, air-purifying respirator with a tight-fitting facepiece and a high-efficiency particulate filter
(APF = 50) Any self-contained breathing apparatus with a full facepiece
(APF = 50) Any supplied-air respirator with a full facepiece

Up to 50 mg/m^3:
(APF = 1000) Any supplied-air respirator operated in a pressure-demand or other positive-pressure mode

Up to 100 mg/m^3:
(APF = 2000) Any supplied-air respirator that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode

pressure mode

Emergency or planned entry into unknown concentrations or IDLH conditions:
(APF = 10,000) Any self-contained breathing apparatus that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode
(APF = 10,000) Any supplied-air respirator that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary self-contained positive-pressure breathing apparatus

Escape:

(APF = 50) Any air-purifying, full-facepiece respirator with an N100, R100, or P100 filter.
Click here for information on selection of N, R, or P filters.

Any appropriate escape-type, self-contained breathing apparatus

Important additional information about respirator selection

See also

INTRODUCTION ICSC CARD: 0052 MEDICAL TESTS: 0127

Page last reviewed: October 30, 2019

Centers for Disease Control and Prevention

Promoting productive workplaces through safety and health research NIOSH

Synonyms & Trade Names

Zinc peroxide

CAS No.

1314-13-2

RTECS No.

ZH4810000

DOT ID & Guide

1516 143

Formula

ZnO

Conversion

IDLH

500 mg/m^3
See: 1314132

Exposure Limits

NIOSH REL
Dust: TWA 5 mg/m^3 C 15 mg/m^3
Fume: TWA 5 mg/m^3 ST 10 mg/m^3
OSHA PEL
TWA 5 mg/m^3 (fume) TWA 15 mg/m^3 (total dust) TWA 5 mg/m^3 (resp dust) See Appendix G

Measurement Methods

NIOSH 7303 , 7502;
OSHA ID121 , ID143
See: NMAM or OSHA Methods

Physical Description

White, odorless solid.

Molecular Weight	Boiling Point	Melting Point	Solubility	Vapor Pressure	Ionization Potential
81.4	?	3587°F	(64°F): 0.0004%	0 mmHg (approx)	NA

Specific Gravity	Flash Point	Upper Explosive Limit	Lower Explosive Limit		
5.61	NA	NA	NA		

Noncombustible Solid

Incompatibilities & Reactivities

Chlorinated rubber (at 419°F), water [Note: Slowly decomposed by water.]

Exposure Routes

inhalation

Symptoms

Metal fume fever: chills, muscle ache, nausea, fever, dry throat, cough; lassitude (weakness, exhaustion); metallic taste; headache; blurred vision; low back pain; vomiting; malaise (vague feeling of discomfort); chest tightness; dyspnea (breathing difficulty), rales, decreased pulmonary function

Target Organs

respiratory system

Personal Protection/Sanitation

(See protection codes)
Skin: No recommendation
Eyes: No recommendation
Wash skin: No recommendation
Remove: No recommendation
Change: No recommendation

First Aid

(See procedures)

Breathing: Respiratory support

Respirator Recommendations

NIOSH/OSHA

Up to 50 mg/m^3:
(APF = 10) Any particulate respirator equipped with an N95, R95, or P95 filter (including N95, R95, and P95 filtering facepieces) except quarter-mask respirators. The following filters may also be used: N99, R99, P99, N100, R100, P100.
Click here for information on selection of N, R, or P filters.
(APF = 10) Any supplied-air respirator

Up to 125 mg/m^3:
(APF = 25) Any supplied-air respirator operated in a continuous-flow mode
(APF = 25) Any powered, air-purifying respirator with a high-efficiency particulate filter.

Up to 250 mg/m^3:

(APF = 50) Any air-purifying, full-facepiece respirator with an N100, R100, or P100 filter.
Click here for information on selection of N, R, or P filters.

(APF = 50) Any supplied-air respirator that has a tight-fitting facepiece and is operated in a continuous-flow mode
(APF = 50) Any powered, air-purifying respirator with a tight-fitting facepiece and a high-efficiency particulate filter
(APF = 50) Any self-contained breathing apparatus with a full facepiece
(APF = 50) Any supplied-air respirator with a full facepiece

Up to 500 mg/m^3:
(APF = 1000) Any supplied-air respirator operated in a pressure-demand or other positive-pressure mode

Emergency or planned entry into unknown concentrations or IDLH conditions:
(APF = 10,000) Any self-contained breathing apparatus that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode
(APF = 10,000) Any supplied-air respirator that has a full facepiece and is operated in a pressure-demand or other

(APF = 10,000) Any supplied-air respirator that has a full facepiece and is operated in a pressure demand or other positive-pressure mode in combination with an auxiliary self-contained positive-pressure breathing apparatus

Escape:

(APF = 50) Any air-purifying, full-facepiece respirator with an N100, R100, or P100 filter.
Click here for information on selection of N, R, or P filters.

Any appropriate escape-type, self-contained breathing apparatus

Important additional information about respirator selection

See also

INTRODUCTION ICSC CARD: 0208 MEDICAL TESTS: 0246

Page last reviewed: October 30, 2019

Centers for Disease Control and Prevention

The National Institute for Occupational Safety and Health (NIOSH)

Promoting productive workplaces through safety and health research

Synonyms & Trade Names

Aroclor® 1242, PCB [Chlorodiphenyl (42% chlorine)], Polychlorinated biphenyl [Chlorodiphenyl (42% chlorine)]

CAS No.

53469-21-9

RTECS No.

TQ1356000

DOT ID & Guide

2315 171

Formula

$C_6H_4ClC_6H_3Cl_2$ (approx)

Conversion

IDLH

Ca [5 mg/m^3]
See: 53469219

Exposure Limits

NIOSH REL
Ca TWA 0.001 mg/m^3 See Appendix A [*Note: The REL also applies to other PCBs.]
OSHA PEL
TWA 1 mg/m^3 [skin]

Measurement Methods

NIOSH 5503;
OSHA PV2089
See: NMAM or OSHA Methods

Physical Description

Colorless to light-colored, viscous liquid with a mild, hydrocarbon odor.

Molecular Weight	Boiling Point	Freezing Point	Solubility	Vapor Pressure	Ionization Potential
258 (approx)	617-691°F	-2°F	Insoluble	0.001 mmHg	?

Specific Gravity	Flash Point	Upper Explosive Limit	Lower Explosive Limit		
(77°F): 1.39	NA	NA	NA		

Nonflammable Liquid, but exposure in a fire results in the formation of a black soot containing PCBs, polychlorinated dibenzofurans & chlorinated dibenzo-p-dioxins.

Incompatibilities & Reactivities

Strong oxidizers

Exposure Routes

inhalation, skin absorption, ingestion, skin and/or eye contact

Symptoms

irritation eyes; chloracne; liver damage; reproductive effects; [potential occupational carcinogen]

Target Organs

Skin, eyes, liver, reproductive system

Cancer Site

[in animals: tumors of the pituitary gland & liver, leukemia]

Personal Protection/Sanitation

(See protection codes)
Skin: Prevent skin contact
Eyes: Prevent eye contact
Wash skin: When contaminated
Remove: When wet or contaminated
Change: Daily
Provide: Eyewash, Quick drench

First Aid

(See procedures)
Eye: Irrigate immediately
Skin: Soap wash immediately
Breathing: Respiratory support
Swallow: Medical attention immediately

Respirator Recommendations

NIOSH

At concentrations above the NIOSH REL, or where there is no REL, at any detectable concentration:
(APF = 10,000) Any self-contained breathing apparatus that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode
(APF = 10,000) Any supplied-air respirator that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary self-contained positive-pressure breathing apparatus

Escape:
(APF = 50) Any air-purifying, full-facepiece respirator (gas mask) with a chin-style, front- or back-mounted organic vapor canister having an N100, R100, or P100 filter.
Click here for information on selection of N, R, or P filters.
Any appropriate escape-type, self-contained breathing apparatus

Important additional information about respirator selection

See also

INTRODUCTION MEDICAL TESTS: 0175

Page last reviewed: October 30, 2019

Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), 29CFR1910/1200 and GHS Rev. 3

Effective date: 05/17/2017 **Revision** : 05/17/2017

Trade Name: Liquinox

1 Identification of the substance/mixture and of the supplier

1.1 Product identifier

Trade Name: Liquinox
Synonyms:
Product number: 1232-1, 1232, 1201-1, 1201, 1205, 1215, 1255

1.2 Application of the substance / the mixture : Cleaning material/Detergent

1.3 Details of the supplier of the Safety Data Sheet

Manufacturer **Supplier**
Alconox, Inc.
30 Glenn Street
White Plains, NY 10603
1-914-948-4040

Emergency telephone number:
ChemTel Inc
North America: 1-800-255-3924
International: 01-813-248-0585

2 Hazards identification

2.1 Classification of the substance or mixture:

In compliance with EC regulation No. 1272/2008, 29CFR1910/1200 and GHS Rev. 3 and amendments.

Hazard-determining components of labeling:
Alcohol ethoxylate
Sodium alkylbenzene sulfonate
Sodium xylenesulphonate
Lauramine oxide

2.2 Label elements:

Eye irritation, category 2A.
Skin irritation, category 2.

Hazard pictograms:

Signal word: Warning

Hazard statements:
H315 Causes skin irritation.
H319 Causes serious eye irritation.

Precautionary statements:
P264 Wash skin thoroughly after handling.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P302+P352 If on skin: Wash with soap and water.
P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
P332+P313 If skin irritation occurs: Get medical advice/attention.
P501 Dispose of contents and container as instructed in Section 13.

Additional information: None.

Hazard description

Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), 29CFR1910/1200 and GHS Rev. 3

Effective date: 05/17/2017 **Revision** : 05/17/2017

Trade Name: Liquinox

Hazards Not Otherwise Classified (HNOC): None

Information concerning particular hazards for humans and environment:

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

Classification system:

The classification is according to EC regulation No. 1272/2008, 29CFR1910/1200 and GHS Rev. 3 and amendments, and extended by company and literature data. The classification is in accordance with the latest editions of international substances lists, and is supplemented by information from technical literature and by information provided by the company.

3 Composition/information on ingredients

3.1 Chemical characterization : None

3.2 Description : None

3.3 Hazardous components (percentages by weight)

Identification	Chemical Name	Classification	Wt. %
CAS number: 68081-81-2	Sodium Alkylbenzene Sulfonate	Acute Tox. 4; H303 Skin Irrit. 2 ; H315 Eye Irrit. 2; H319	10-25
CAS number: 1300-72-7	Sodium Xylenesulphonate	Eye Irrit. 2; H319	2.5-10
CAS number: 84133-50-6	Alcohol Ethoxylate	Skin Irrit. 2 ; H315 Eye Dam. 1; H318	2.5-10
CAS number: 1643-20-5	Lauramine oxide	Skin Irrit. 2 ; H315 Eye Dam. 1; H318	1-2

3.4 Additional Information: None.

4 First aid measures

4.1 Description of first aid measures

General information: None.

After inhalation:

Maintain an unobstructed airway.

Loosen clothing as necessary and position individual in a comfortable position.

After skin contact:

Wash affected area with soap and water.

Seek medical attention if symptoms develop or persist.

After eye contact:

Rinse/flush exposed eye(s) gently using water for 15-20 minutes.

Remove contact lens(es) if able to do so during rinsing.

Seek medical attention if irritation persists or if concerned.

After swallowing:

Rinse mouth thoroughly.

Seek medical attention if irritation, discomfort, or vomiting persists.

4.2 Most important symptoms and effects, both acute and delayed

None

Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), 29CFR1910/1200 and GHS Rev. 3

Effective date: 05/17/2017 **Revision** : 05/17/2017

Trade Name: Liquinox

4.3 Indication of any immediate medical attention and special treatment needed:

No additional information.

5 Firefighting measures

5.1 Extinguishing media

Suitable extinguishing agents:

Use appropriate fire suppression agents for adjacent combustible materials or sources of ignition.

For safety reasons unsuitable extinguishing agents : None

5.2 Special hazards arising from the substance or mixture :

Thermal decomposition can lead to release of irritating gases and vapors.

5.3 Advice for firefighters

Protective equipment:

Wear protective eye wear, gloves and clothing.
Refer to Section 8.

5.4 Additional information :

Avoid inhaling gases, fumes, dust, mist, vapor and aerosols.
Avoid contact with skin, eyes and clothing.

6 Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures :

Ensure adequate ventilation.
Ensure air handling systems are operational.

6.2 Environmental precautions :

Should not be released into the environment.
Prevent from reaching drains, sewer or waterway.

6.3 Methods and material for containment and cleaning up :

Wear protective eye wear, gloves and clothing.

6.4 Reference to other sections : None

7 Handling and storage

7.1 Precautions for safe handling :

Avoid breathing mist or vapor.
Do not eat, drink, smoke or use personal products when handling chemical substances.
Conditions for safe storage, including any incompatibilities:
Store closed upright and in a cool dry place, should be 15 - 30 deg C or 60 - 90 deg F.

7.2 Specific end use(s):

No additional information.

Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), 29CFR1910/1200 and GHS Rev. 3

Effective date: 05/17/2017 **Revision** : 05/17/2017

Trade Name: Liquinox

8 Exposure controls/personal protection

8.1 Control parameters :

No applicable occupational exposure limits

8.2 Exposure controls

Appropriate engineering controls:

Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use or handling.

Respiratory protection:

Not needed under normal conditions.

Protection of skin:

Select glove material impermeable and resistant to the substance.

Eye protection:

Safety goggles or glasses, or appropriate eye protection.

General hygienic measures:

Wash hands before breaks and at the end of work.
Avoid contact with skin, eyes and clothing.

9 Physical and chemical properties

Appearance (physical state, color):	Pale yellow liquid	**Explosion limit lower:** **Explosion limit upper:**	Not determined or not available. Not determined or not available.
Odor:	Not determined or not available.	**Vapor pressure at 20°C:**	Not determined or not available.
Odor threshold:	Not determined or not available.	**Vapor density:**	Not determined or not available.
pH-value:	8.5 as is	**Relative density:**	Not determined or not available.
Melting/Freezing point:	Not determined or not available.	**Solubilities:**	Not determined or not available.
Boiling point/Boiling range:	Not determined or not available.	**Partition coefficient (n-octanol/water):**	Not determined or not available.
Flash point (closed cup):	Not determined or not available.	**Auto/Self-ignition temperature:**	Not determined or not available.
Evaporation rate:	Not determined or not available.	**Decomposition temperature:**	Not determined or not available.
Flammability (solid, gaseous):	Not determined or not available.	**Viscosity:**	a. Kinematic: Not determined or not available. b. Dynamic: Not determined or not available.

Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), 29CFR1910/1200 and GHS Rev. 3

Effective date: 05/17/2017 **Revision** : 05/17/2017

Trade Name: Liquinox	
Density at 20°C:	Not determined or not available.

10 Stability and reactivity

10.1 Reactivity : None

10.2 Chemical stability : None

10.3 Possibility hazardous reactions : None

10.4 Conditions to avoid : None

10.5 Incompatible materials : None

10.6 Hazardous decomposition products : None

11 Toxicological information

11.1 Information on toxicological effects :

Acute Toxicity:

Oral:

: LD50 >5000 mg per kg Rat, Oral) - product .

Chronic Toxicity: No additional information.

Skin corrosion/irritation:

Alcohol Ethoxylate: May cause mild to moderate skin irritation.

Sodium Alkylbenzene Sulfonate: Causes skin irritation.

Lauramine oxide: Causes skin irritation.

Serious eye damage/irritation:

Sodium Alkylbenzene Sulfonate: Causes serious eye irritation.

Alcohol Ethoxylate: Causes moderate to severe eye irritation and conjunctivitis.

Sodium xylenesulphonate: Rabbit: irritating to eyes.

Lauramine oxide: Causes serious eye damage.

Respiratory or skin sensitization: No additional information.

Carcinogenicity: No additional information.

IARC (International Agency for Research on Cancer): None of the ingredients are listed.

NTP (National Toxicology Program): None of the ingredients are listed.

Germ cell mutagenicity: No additional information.

Reproductive toxicity: No additional information.

STOT-single and repeated exposure: No additional information.

Additional toxicological information: No additional information.

12 Ecological information

12.1 Toxicity:

Sodium Alkylbenzene Sulfonate: Fish, LC50 1.67 mg/l, 96 hours.

Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), 29CFR1910/1200 and GHS Rev. 3

Effective date: 05/17/2017 **Revision** : 05/17/2017

Trade Name: Liquinox

Sodium Alkylbenzene Sulfonate: Aquatic invertebrates, EC50 Daphnia 2.4 mg/l, 48 hours.
Sodium Alkylbenzene Sulfonate: Aquatic Plants, EC50 Algae 29 mg/l, 96 hours.
Lauramine oxide: Fish, LC0 24.3 mg/l, 96h [Killifish (Cyprinodontidae)]
Lauramine oxide: Aquatic invertebrates, (LC50): 3.6 mg/l 96 hours [Daphnia (Daphnia)].
Lauramine oxide: Aquatic plants, EC50 Algae 0.31 mg/l 72 hours [Algae]
Alcohol Ethoxylate: Aquatic invertebrates, (LC50): 4.01 mg/l 48 hours [Daphnia (daphnia)].

12.2 Persistence and degradability: No additional information.

12.3 Bioaccumulative potential: No additional information.

12.4 Mobility in soil: No additional information.

General notes: No additional information.

12.5 Results of PBT and vPvB assessment:

PBT: No additional information.

vPvB: No additional information.

12.6 Other adverse effects: No additional information.

13 Disposal considerations

13.1 Waste treatment methods (consult local, regional and national authorities for proper disposal)

Relevant Information:

It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities. (US 40CFR262.11).

14 Transport information

14.1 UN Number: ADR, ADN, DOT, IMDG, IATA	None
14.2 UN Proper shipping name: ADR, ADN, DOT, IMDG, IATA	None
14.3 Transport hazard classes: ADR, ADN, DOT, IMDG, IATA	**Class:** None **Label:** None **LTD. QTY:** None

US DOT

Limited Quantity Exception: None

Bulk:
RQ (if applicable): None
Proper shipping Name: None
Hazard Class: None
Packing Group: None
Marine Pollutant (if applicable): No additional information.
Comments: None

Non Bulk:
RQ (if applicable): None
Proper shipping Name: None
Hazard Class: None
Packing Group: None
Marine Pollutant (if applicable): No additional information.
Comments: None

Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), 29CFR1910/1200 and GHS Rev. 3

Effective date: 05/17/2017 **Revision** : 05/17/2017

Trade Name: Liquinox

14.4 Packing group: ADR, ADN, DOT, IMDG, IATA	None
14.5 Environmental hazards :	None
14.6 Special precautions for user:	None
Danger code (Kemler):	None
EMS number:	None
Segregation groups:	None

14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code: Not applicable.

14.8 Transport/Additional information:

Transport category:	None
Tunnel restriction code:	None
UN "Model Regulation":	None

15 Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture.

North American

SARA

Section 313 (specific toxic chemical listings): None of the ingredients are listed.
Section 302 (extremely hazardous substances): None of the ingredients are listed.

CERCLA (Comprehensive Environmental Response, Clean up and Liability Act) Reportable

Spill Quantity: None of the ingredients are listed.

TSCA (Toxic Substances Control Act):

Inventory: All ingredients are listed.
Rules and Orders: Not applicable.

Proposition 65 (California):

Chemicals known to cause cancer: None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for females: None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for males: None of the ingredients are listed.

Chemicals known to cause developmental toxicity: None of the ingredients are listed.

Canadian

Canadian Domestic Substances List (DSL):
All ingredients are listed.

EU

REACH Article 57 (SVHC): None of the ingredients are listed.

Germany MAK: Not classified.

Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), 29CFR1910/1200 and GHS Rev. 3

Effective date: 05/17/2017 **Revision** : 05/17/2017

Trade Name: Liquinox

Asia Pacific

Australia

Australian Inventory of Chemical Substances (AICS): All ingredients are listed.

China

Inventory of Existing Chemical Substances in China (IECSC): All ingredients are listed.

Japan

Inventory of Existing and New Chemical Substances (ENCS): All ingredients are listed.

Korea

Existing Chemicals List (ECL): All ingredients are listed.

New Zealand

New Zealand Inventory of Chemicals (NZOIC): All ingredients are listed.

Philippines

Philippine Inventory of Chemicals and Chemical Substances (PICCS): All ingredients are listed.

Taiwan

Taiwan Chemical Substance Inventory (TSCI): All ingredients are listed.

16 Other information

Abbreviations and Acronyms: None

Summary of Phrases

Hazard statements:

H315 Causes skin irritation.
H319 Causes serious eye irritation.

Precautionary statements:

P264 Wash skin thoroughly after handling.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P302+P352 If on skin: Wash with soap and water.
P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
P332+P313 If skin irritation occurs: Get medical advice/attention.
P501 Dispose of contents and container as instructed in Section 13.

Manufacturer Statement:

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

NFPA: 1-0-0

HMIS: 1-0-0

ATTACHMENT H
EMPLOYEE PROCEDURES HANDBOOK ADDENDUM:

GSI PANDEMIC DISEASE PLAN

Potential Hazards and Mitigation Measures

This GSI Environmental Inc. (GSI) Employee Procedures Handbook (EPH) Addendum (Addendum) outlines the potential hazards and safety measures related to pandemics, in particular the Coronavirus Disease 2019 (COVID-19), that all GSI employees should understand and implement when completing work-related activities and as general precautions for all staff during pandemic outbreaks. This Addendum also outlines additional health and safety precautions as a supplement to the general health and safety procedures outlined in the GSI Environment, Health, and Safety (EHS) Program Manual and Procedures Handbook. This Addendum is written to guide GSI employees in implementing essential work-related tasks, such as field operations, in accordance with Occupational Safety and Health Administration (OSHA) *Guidance on Preparing Workplaces for COVID-19* (OSHA COVID-19 Guidance).[1]

1.0 SCOPE OF THIS ADDENDUM

Many cities, counties, and states may implement 'stay-at-home' orders during a pandemic outbreak, such as during the COVID-19 outbreak.[2,3,4] In addition, certain orders (such as the State of California and Harris County, Texas) under the guidance of the Department of Homeland Security may deem certain job sectors' infrastructure workers as essential, including environmental remediation and monitoring under the energy sector and environmental protection and remediation under the water and wastewater sector.[5,6,7,8] Many GSI projects fall under these or other essential job sectors required to continue business operations during the COVID-19 outbreak. Several regulatory agencies have indicated that their oversight, including field work, are essential activities for protection of human health and the environment and will continue under COVID-19 protocols.[8,9]

It is important to be aware of, and implement, best practices for personal protection to mitigate potential transmission of diseases during a pandemic. This Addendum specifically describes potential health hazards and mitigation measures associated with COVID-19, in accordance with the guidance of the OSHA *Guidance on Preparing Workplaces for COVID-19*.[10] Safe practices for the reopening of GSI offices are discussed under separate cover and included as Attachment 1 to this Addendum (*GSI Plan for Return to Office Memorandum*).[11] However, the mitigation measures described herein should be practiced during any future pandemic outbreaks. It is important to note that the information on diseases during a pandemic outbreak, such as COVID-19, is evolving and procedures described in this Addendum may be updated based on the best available information at that time.

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[1] https://www.osha.gov/Publications/OSHA3990.pdf
[2] https://covid19.ca.gov/img/Executive-Order-N-33-20.pdf
[3] fhttps://www.readyharris.org/Stay-Home
[4] http://www.austintexas.gov/edims/document.cfm?id=337824
[5] https://www.cisa.gov/sites/default/files/publications/CISA-Guidance-on-Essential-Critical-Infrastructure-Workers-1-20-508c.pdf
[6] https://www.cisa.gov/sites/default/files/publications/CISA_Guidance_on_the_Essential_Critical_Infrastructure_Workforce_Version_2.0_Updated.pdf
[7] https://covid19.ca.gov/img/EssentialCriticalInfrastructureWorkers.pdf
[8] https://www.waterboards.ca.gov/resources/covid-19_updates/
[9] LinkedIn notification by Brownfield Development Manager, Cypress Division, Cal-EPA DTSC, 24 March 2020.
[10] See note 1.
[11] GSI Environmental Inc. (GSI), 2021. GSI Plan for Return to Office Memorandum. 4 January 2021.

2.0 WHAT IS COVID-19

COVID-19 is a respiratory disease caused by the novel SARS-CoV-2 virus; a strain of coronavirus discovered in 2019. Coronaviruses (CoV) are a large family of viruses that cause illness ranging from the common cold to more severe diseases such as Middle East Respiratory Syndrome (MERS-CoV) and Severe Acute Respiratory Syndrome (SARS-CoV).[12]

Coronaviruses are transmitted between animals and humans (i.e., zoonotic) and affect the respiratory system in humans. Common signs of infection include respiratory symptoms, fever, cough, shortness of breath and breathing difficulties. In more severe cases, infection can cause pneumonia, severe acute respiratory syndrome, kidney failure and even death.

Infection with SARS-CoV-2, the virus that causes COVID-19, can cause illness ranging from mild to severe. In some cases, infection can be fatal. As listed above, symptoms typically include fever, cough, and shortness of breath. Some people infected with the virus have reported experiencing other non-respiratory symptoms. Other people, referred to as asymptomatic cases, have experienced no symptoms at all.[13] According to the Centers for Disease Control and Prevention (CDC), symptoms of COVID-19 may appear in as few as 2 days or as long as 14 days after exposure.[14]

3.0 COVID-19 SYMPTOMS AND TRANSMISSION

The COVID-19 virus affects people in different ways. COVID-19 is a respiratory disease and most infected people will develop mild to moderate symptoms and recover without requiring special treatment. People who have underlying medical conditions and those over 60 years old have a higher risk of developing severe symptoms and potentially death.

Common symptoms include:

- fever
- tiredness
- dry cough
- loss of the sense of taste or smell

Other symptoms may include:

- shortness of breath
- aches and pains
- sore throat
- and very few people will report diarrhea, nausea or a runny nose[15]

Symptoms generally appear within 2 to 14 days. COVID-19 is mainly spread from person-to-person through the following pathways:

- Between people in close contact (within about 6 feet); and

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[12] https://www.who.int/health-topics/coronavirus
[13] See note 1.
[14] https://www.cdc.gov/coronavirus/2019-ncov/symptoms-testing/symptoms.html
[15] https://www.who.int/health-topics/coronavirus#tab=tab_3

- Through respiratory droplets produced when an infected person coughs or sneezes. These droplets can land in the mouths or noses, or possibly inhaled into the lungs of people in close proximity.[16]

COVID-19 may also be transmitted by touching a surface or object that has the virus on it followed by touching one's own mouth, nose, or eyes. However, this is not thought to be the primary way the virus spreads. People are most contagious when they are most symptomatic (i.e., experiencing fever, cough, and/or shortness of breath). Some spread might be possible before people show symptoms; there have been reports of this type of asymptomatic transmission with this new coronavirus, but this is also not thought to be the main way the virus spreads. Although the United States has implemented public health measures to limit the spread of the virus, it is likely that some person-to-person transmission will continue to occur. The CDC website provides the latest information about COVID-19 transmission: www.cdc.gov/coronavirus/2019-ncov/about/transmission.html.

4.0 PREVENTION AND MITIGATION MEASURES

During pandemic outbreaks, all GSI employees who would like to work from home regardless of their position may be given the opportunity to do so. Consideration of individual family circumstances and protective health measures must be made by each employee. It is GSI's current policy that all employees follow CDC guidelines and other state and/or county orders related to pandemic outbreaks, such as the COVID-19 pandemic, including guidelines discussed in the OSHA COVID-19 Guidance and the California Division of Occupational Safety and Health (Cal/OSHA) guidance.[17,18] Furthermore, GSI encourages employees to consult with their primary care physician and consider immunization guidelines of the CDC and/or local health departments to obtain appropriate immunizations when vaccines become available. [19] Additional guidelines for mitigation measures while working in the GSI offices, including procedures for disinfecting surfaces and safety measures while completing work at the offices, are described in the *GSI Plan for Return to Work Memorandum* and included as Attachment 1 to this Addendum.

GSI will continue to provide its services as a member of the Essential Critical Infrastructure Workforce, which may include some GSI employees performing fieldwork during a pandemic outbreak. Therefore, certain additional health and safety measures to prevent the transmission and spread of diseases, as described herein, should be followed.

Engineering Controls

Below is a description of potential engineering controls that should be implemented as appropriate.

Utilize Plastic on Surfaces and/or Disinfect Surfaces

Put plastic sheeting on surfaces where field staff will be eating or drinking and change plastic out as necessary to prevent the spread of the disease. If plastic is not available, clean and disinfect surfaces prior to and after use.

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[16] https://www.cdc.gov/coronavirus/2019-ncov/prepare/transmission.html?CDC_AA_refVal=https%3A%2F%2Fwww.cdc.gov%2Fcoronavirus%2F2019-ncov%2Fabout%2Ftransmission.html
[17] https://www.dir.ca.gov/dosh/coronavirus/General-Industry.html
[18] https://www.osha.gov/Publications/OSHA3990.pdf
[19] https://www.cdc.gov/coronavirus/2019-ncov/vaccines/recommendations.html

Additionally, all frequently touched surfaces such as tables, car doors, light switches, countertops, handles, phones, keyboards, toilets, faucets, and sinks should be disinfected at least daily, preferably several times a day. If surfaces are dirty, clean them by using detergent or soap and water prior to disinfection.

Disinfectants that can be used include a bleach solution (1/3 cup to 1 gallon of water) or the other disinfectants suggested by the United States Environmental Protection Agency (USEPA) in List N: Disinfectants for Use Against SARS-CoV-2 (https://www.epa.gov/pesticide-registration/list-n-disinfectants-use-against-sars-cov-2).

Increase Ventilation

Increase ventilation where applicable by completing work outside instead of inside.

Administrative Controls

Below is a description of administrative controls that should be implemented as appropriate.

Stay at Home if You Are Sick

First and foremost, if you are sick, stay home. Do not perform fieldwork if you are sick. If you wake up sick prior to fieldwork, inform the Project Team Leader (PTL) who will subsequently schedule another staff member or reschedule the work. During the pandemic outbreak, it is GSI's policy to remain at home and follow CDC-recommended social isolation and/or self-quarantine protocols if you are sick or think that you may have contracted the disease.

Avoid Sharing Personal Items

In general, it is never a good idea to share personal items, but particularly not during a pandemic outbreak. It is important that you do not share coffee cups, water bottles, or any other personal items. Label your disposable water bottles with your initials to prevent others from mistaking your water bottles for their own.

Maintain a Safe Distance from Others (6-foot Rule)

As a general safety practice during a pandemic outbreak and to the extent practical, try to maintain a safe distance (i.e., 6 feet) from other field personnel and subcontractors while performing fieldwork. Do not shake hands, hug, or perform any other greeting with physical contact. Other ideas for greetings are waves or verbal greetings.

Wash Your Hands

Wash your hands often with soap and warm water for at least 20 seconds, especially after you have been in a public place, or after blowing your nose, coughing, or sneezing. If soap and water are not readily available, use company-supplied hand sanitizer that contains at least 60% alcohol. Cover all surfaces of your hands and rub them together until they feel dry. Avoid touching your eyes, nose, and mouth with unwashed hands. Use chemical-resistant gloves whenever possible.

Cover Coughs and Sneezes

Cover your mouth and nose with a tissue when you cough or sneeze or use the inside of your elbow. Throw any used tissues in the trash and immediately wash your hands with soap and water for at least 20 seconds. If soap and water are not readily available, clean your hands with a hand sanitizer that contains at least 60% alcohol.

Travel to and From Job Sites

Travel to and from job sites to implement essential field activities will follow local, state, and federal guidance and regulations. Decisions on travel (e.g., number of staff per vehicle and type of travel) will remain up to the project team and be discussed between field staff, PTL, and the principal in charge (PIC). Travel arrangements should be specified in the Site-Specific Health and Safety Plan (SS-HASP). Generally, to avoid other potential hazards (particularly on longer travel in vehicles), it may be acceptable to have more than one staff member in a vehicle at a time. However, social distancing procedures (such as rolling down windows and maintaining safe distances) should be implemented as possible.

Client- and/or site-specific travel requirements at host facilities at which GSI projects are being conducted may also apply. In some cases, these requirements may differ from GSI's standard policy. In such cases, the more protective standard will apply.

Personal Protective Equipment (PPE)

Below is a description of personal protective equipment (PPE) that may be used to help prevent the spread of diseases. All PPE should be inspected prior to using as specified in the GSI EHS Program Manual.

Face Coverings

The CDC and many counties and cities recommend and/or require the use of cloth face coverings or medical masks in public settings where other social distancing measures are difficult to maintain (e.g., grocery stores and pharmacies), especially in areas of significant community-based transmission.[20,21,22,23] In addition, some cities have issued orders requiring both employees and patrons to wear face coverings, such as scarves, bandanas, neck gaiters, or other fabric coverings or medical masks at essential businesses that provide retail goods, food, banking, and commercial services.[24] [25]

GSI personnel should carry clean cloth face coverings or medical masks when working outside of their home to ensure they are prepared to follow regional requirements for face coverings when visiting essential businesses, such as gas stations, grocery stores, or other retail, commercial, or public settings.

The use of cloth face coverings or medical masks compliments and does not replace other disease mitigation and prevention guidelines, such as for COVID-19.[26] It is important to follow other procedures described herein in conjunction with the use of face coverings, such as those described below including: washing your hands or using hand sanitizer and avoiding touching your eyes, nose, and mouth with unwashed hands.

The use of cloth face coverings or medical masks also does not replace or complement the use of respiratory protection personal PPE, as needed based on site-specific conditions, as described below.

The CDC has issued guidance and do-it-yourself instructions on making sewn and unsewn masks from cloth (such as T-shirt material), which are available on its website.[27]

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[20] https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/cloth-face-cover.html
[21] https://1ccaxf2hhhbh1jcwiktlicz7-wpengine.netdna-ssl.com/wp-content/uploads/2020/04/EOC-Press-Release-36-Masks.pdf
[22] https://occovid19.ochealthinfo.com/article/oc-health-officers-orders-recommendations
[23] https://www.cdph.ca.gov/Programs/OPA/Pages/NR20-128.aspx
[24] http://legacy.cityofirvine.org/civica/filebank/blobdload.asp?BlobID=32417
[25] Ibid
[26] https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/cloth-face-cover.html
[27] https://www.cdc.gov/coronavirus/2019-ncov/downloads/DIY-cloth-face-covering-instructions.pdf

Chemical-Resistant Gloves

Another strategy when handwashing and/or hand sanitizer is unavailable is to utilize clean chemical-resistant gloves when eating or drinking. In accordance with GSI EHS Program Manual and SS-HASP guidelines, disposable gloves are to be used on site when handling potentially impacted media. Therefore, chemical resistant gloves (e.g., latex or nitrile) or other disposable gloves should be readily available as PPE.

Respiratory Protection

GSI personnel are always allowed to utilize their GSI-issued respiratory PPE, even if not required for a specific job. As general practice, GSI work, including fieldwork, will not be performed in areas or with personnel of known infections. Therefore, respiratory protection such as air purifying respirators should not be required and/or provided unless other safety hazards require such PPE.

However, if deemed necessary, air purifying respirators with a particulate (purple) cartridge may be used to protect field personnel from airborne droplets. Cartridges must be disposed of after each use, and respirators must be disinfected after each use.

"Surgical" masks also are designed to provide minimum protection from nearby airborne droplets. However, they are not designed to pass a fit test as they do not form a tight fit and therefore should not be considered respiratory protection.

The use of respiratory protection must comply with state and federal regulations and GSI's Respiratory Protection Program, which includes fitness for use, proper training, fit testing, and use procedures.

Site-Specific Mitigation Measures

Specific job sites may require additional measures with regard to the pandemic outbreak. For example, practices such as temperature screening may be required for site entry. These site-specific measures should be detailed in the SS-HASP. Field staff that wish to opt out of site-specific screening will not be allowed on-site and should speak with the PTL prior to mobilization.

5.0 FIELD DOCUMENTS

The following additional documents should be kept with this Addendum, and supplemented as appropriate for project-specific work and for the pandemic outbreak at that time:

1. Executive Orders for the cities, counties, and/or states within which work is being conducted;
2. U.S. Department of Homeland Security, Advisory Memorandum on Identification of Essential Critical Infrastructure Workers During COVID-19 Response, 28 March 2020 (Version 2.0 Updated);
3. Copies of permits from county health care agencies or other permitting agencies;
4. Copies of orders or oversight agreements with regulatory agencies for the work being conducted (e.g., PFAS chrome plating or airport orders, oversight agreements with state and county agencies for environmental actions);[28]
5. Work Plans outlining the work being performed that reference regulatory directives and their associated agency approval letter, as applicable; and
6. GSI business cards.

[28] Also include copies of applicable notifications or regulatory updates such as the California State Water Resources Control Board, Compliance with Water Board Requirements During the Coronavirus 2019 (COVID-19) Emergency, March 20, 2020 (https://www.waterboards.ca.gov/resources/covid-19_updates/).

GSI personnel performing field activities should discuss talking points with the project PTL and PIC and identify key documents, such as those outlined above, to have available to demonstrate compliance with government orders and any prevention and mitigation measures recommended by CDC.

6.0 COMMUNICATION

All communications regarding amendments to the GSI Pandemic Disease Plan will be transmitted via email by GSI's Human Resource Manager (HRM), Rebecca Grant. The company HRM will maintain up-to-date lists of all key contacts, including phone numbers and email addresses for all GSI personnel (see GSI "Phone List"). In the event of an outbreak that impacts GSI's ability to perform its services, the HRM will facilitate external/customer communications, including notification when operations may resume.

All employee pandemic-related concerns and issues must be communicated directly to the company HRM. In addition, all employees must log in on their respective office-specific Outlook Calendars when visiting the office for any purpose or for any amount of time.

7.0 SUMMARY

This Addendum describes the potential hazards and safety measures related to infectious diseases during pandemic outbreaks that all GSI employees should understand and implement when working. The information described within this Addendum is meant to be used as guidelines to help GSI personnel implement office and field work safely and under federal and state regulations. As a company implementing essential services, GSI and its staff continue to hold safety paramount to any field activities. Additionally, it is important to note that the information on any infectious disease during a pandemic will evolve and procedures described in this addendum may be updated based on the best available information at that time.

The company HRM is responsible for creating, amending, and enforcing GSI's Pandemic Disease Plan. The company HRM will routinely review the GSI Pandemic Disease Plan and amend, as needed, to ensure compliance with local, state, and federal guidelines. Furthermore, following a pandemic event, the company HRM will identify "lessons learned" and implement any corrective actions, including, but not limited to, amending the GSI Pandemic Disease Plan. Any amendment to the GSI Pandemic Disease Plan will be immediately communicated to all employees via email by the company HRM.

Attachments

Attachment 1. GSI Plan for Return to Office Memorandum

GSI ENVIRONMENTAL

M E M O R A N D U M

TO: **Houston Staff**

FROM: **Management**

RE: **GSI Return to Work Plan-Updated**

We continue to be at ***High Risk*** for COVID infection and transmission. Please read the following guidelines for working in a GSI Office. Attached is GSI's Pandemic Disease Plan from our Employee Procedures Handbook and a checklist on minimum standard health protocols for office-based employees from the Texas Department of Health and Human Services.

As has been stated in prior email correspondence, working in the office remains entirely elective. GSI will provide masks, gloves, and hand sanitizer in all offices.

Those who choose to work in the office will need to strictly adhere to the following guidelines.

1. **Travel Restrictions:** Limit airplane travel to essential business. Upon return, please follow current CDC and state and local guidelines on the length of time to remain away from the office.
2. **Calendar Notice of Office Use:** Record your planned office visit (day and length of time) on the Outlook calendar for your office location, at least one day prior to your visit.
3. **Occupancy Limits:** For the time being, GSI will limit office occupancy based upon the 25% rule. Currently, both Texas and California are stating that "businesses located in office buildings may open but must limit their occupancy to the greater of 10 employees or 25% of their workforce." Based on the headcount of our offices, no more than 10 employees can be in these offices, at any given time. Priority will be given to those that have a particular need to be in the office that day.
4. **Self-Screen in Advance:** See check for symptoms on attached checklist. Check your temperature every day before coming to work. If you are exhibiting symptoms, do not come to the office.
5. **Entering the Building:** Wear masks in common areas of building, including lobbies, bathrooms and elevators. Do not use elevator with more than 4 people.
6. **Sanitize Upon Arrival at GSI:** Wash your hands as soon as you arrive at the office, using soap and water or sanitizing gel. Wipe down your work area before starting work. Cleaning and sanitizing supplies will be provided.
7. **Guests:** For the time being, we are not allowing guests in our offices. If an in-person client meeting is critical, prior approval from HR is required and guest(s) must complete a questionnaire and agree to follow the protocols we have in place for our offices.
8. **Safety During the Workday:**
   - Maintain 6 feet of separation from other co-workers
   - Wash hands frequently
   - Clean your work surface
   - Avoid shared workspaces (desks, offices, and cubicles) and work items (phones, computers, other work tools, and equipment) when possible.
   - If they must be shared, clean and disinfect shared workspaces and work items before and after use.
   - Wipe down commonly used equipment after use (copiers etc.).
   - Wear a mask in all common areas (elevators, restrooms, hallways, copy room, etc.)
   - Wear a mask if you share a cubicle wall with another employee who is also in the office.
   - **All** Conference Rooms and Kitchen: Limit occupancy to 1 person at a time and be sure to WIPE DOWN all areas that you have used.

GSI ENVIRONMENTAL

GSI Environmental Inc.
COVID-19 SCREENING QUESTIONNAIRE for Visitors

The safety of our employees and guests is our overriding priority. As the coronavirus (COVID-19) pandemic continues, we are monitoring the situation closely and following the guidance from the Centers for Disease Control and Prevention and local health authorities. In order to prevent the spread of the coronavirus and reduce the potential risk of exposure to our workforce, we are asking all visitors to GSI offices to complete and submit this questionnaire prior to entering the worksite. Please do not enter the worksite until your responses have been reviewed and your entry has been approved.

Please respond to each of the following questions truthfully and to the best of your ability. Your participation is important to help us take precautionary measures to protect you and our employees.

Name: _____ Company: _____

Title: _____ Cell: _____ Email: _____

Representations

1. **Are you currently experiencing, or have you experienced in the past 14 days, any of the following symptoms? (Please take your temperature before you answer this question.)**

   Yes ☐ No ☐ Fever (100.4° F/37.8° C or greater as measured by an oral thermometer)

   Yes ☐ No ☐ Cough

   Yes ☐ No ☐ Shortness of breath or difficulty breathing

   Yes ☐ No ☐ Sore throat

   Yes ☐ No ☐ New loss of taste or smell

   Yes ☐ No ☐ Chills

   Yes ☐ No ☐ Head or muscle aches

   Yes ☐ No ☐ Nausea, diarrhea, vomiting

2. **In the past 14 days, have you been in close proximity to anyone who was experiencing any of the above symptoms or has experienced any of the above symptoms since your contact?**

   Yes ☐ No ☐

GSI ENVIRONMENTAL

GSI Environmental Inc.
COVID-19 SCREENING QUESTIONNAIRE Visitors

3. **In the past 14 days, have you been in close proximity to anyone who has tested positive for COVID-19?**

   Yes ☐ No ☐

4. **Have you been tested for COVID-19 and are waiting to receive test results?**

   Yes ☐ No ☐

5. **Have you tested positive for COVID-19, or are you presumptively positive for COVID-19 based on your health care provider's assessment or your symptoms?**

   Yes ☐ No ☐

6. **In the past 14 days, have you been on a commercial flight or traveled outside of the United States?**

   Yes ☐ No ☐

7. **In the past 14 days, have you been in close proximity to anyone who has been on a commercial flight or traveled outside of the United States?**

   Yes ☐ No ☐

Certification

I hereby certify that the responses provided above are true and accurate to the best of my knowledge.

Signature: _____ Date: _____

Access to worksite: ☐ Approved ☐ Denied

Off-Site LFM Interim Cleanup and Sampling Results Memorandum
901 New Dock Street
Terminal Island, California 90731

ATTACHMENT C

Sampling Photolog

PT01: 10/6/2021

PT01: 10/6/2021

PT01A: 10/6/2021

PT01A: 10/6/2021

Attachment C
Sampling Photo Log
Pasha Stevedoring & Terminals
701 New Dock Street, Terminal Island, CA

By: TFW	Date: 10/18/2021	Project: 6013
GSI ENVIRONMENTAL		**GSI Locations PT01 & PT01A**

PT02: 10/6/2021

PT02: 10/6/2021

PT03: 10/6/2021

PT03: 10/6/2021

Attachment C
Sampling Photo Log
Pasha Stevedoring & Terminals
701 New Dock Street, Terminal Island, CA

By: TFW	Date: 10/18/2021	Project: 6013
GSI ENVIRONMENTAL		**GSI Locations PT02 & PT03**

PT04: 10/6/2021

PT04: 10/6/2021

PT04A: 10/6/2021

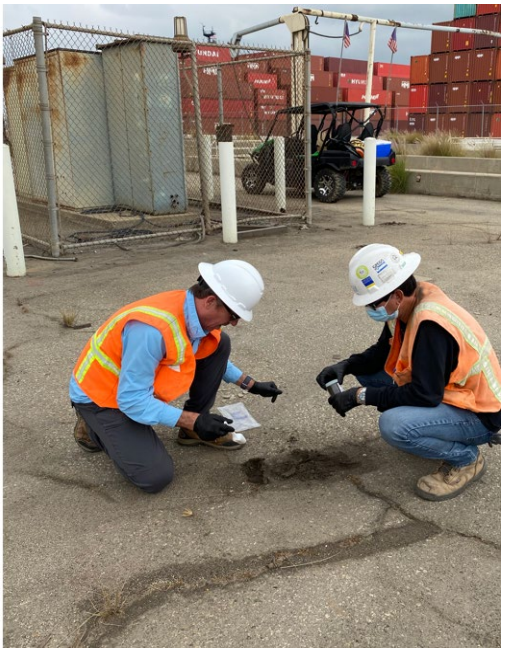
PT04A: 10/6/2021

Attachment C
Sampling Photo Log
Pasha Stevedoring & Terminals
701 New Dock Street, Terminal Island, CA

By: TFW	Date: 10/18/2021	Project: 6013
GSI ENVIRONMENTAL		**GSI Locations PT04 & PT04A**

PT05: 10/6/2021

PT05: 10/6/2021



PT05A: 10/6/2021

PT05A: 10/6/2021

Attachment C
Sampling Photo Log
Pasha Stevedoring & Terminals
701 New Dock Street, Terminal Island, CA

By: TFW	Date: 10/18/2021	Project: 6013
GSI ENVIRONMENTAL		**GSI Locations PT05 & PT05A**

PT06: 10/6/2021

PT06: 10/6/2021

PT07: 10/6/2021

PT07: 10/6/2021

Attachment C
Sampling Photo Log
Pasha Stevedoring & Terminals
701 New Dock Street, Terminal Island, CA

By: TFW	Date: 10/18/2021	Project: 6013
GSI ENVIRONMENTAL		**GSI Locations PT06 & PT07**

PT08: 10/6/2021

PT08: 10/6/2021

PT08C: 10/6/2021

PT08C: 10/6/2021

Attachment C
Sampling Photo Log
Pasha Stevedoring & Terminals
701 New Dock Street, Terminal Island, CA

By: TFW	Date: 10/18/2021	Project: 6013
GSI ENVIRONMENTAL		**GSI Locations PT08 & PT08C**

PT08A: 10/6/2021

PT08A: 10/6/2021

PT08B: 10/6/2021

PT08B: 10/6/2021

Attachment C
Sampling Photo Log
Pasha Stevedoring & Terminals
701 New Dock Street, Terminal Island, CA

By: TFW	Date: 10/18/2021	Project: 6013
GSI ENVIRONMENTAL		**GSI Location PT08A & PT08B**

Picture not available

PT02-A: 12/22/2021

Attachment C **Sampling Photo Log** Pasha Stevedoring & Terminals 701 New Dock Street, Terminal Island, CA		
By: JHN	Date: 3/29/2022	Project: 6013
GSI ENVIRONMENTAL		**GSI Location PT02-A**

Picture not available

Sample 1: 1/24/2022

Picture not available

Sample 2: 1/24/2022

Picture not available

Sample 3: 1/24/2022

Attachment C
Sampling Photo Log
Pasha Stevedoring & Terminals
701 New Dock Street, Terminal Island, CA

By: JHN	Date: 3/29/2022	Project: 6013
GSI ENVIRONMENTAL		**GSI Location Sample 1 - 3**

Sample 4: 12/22/2021

Attachment C **Sampling Photo Log** Pasha Stevedoring & Terminals 701 New Dock Street, Terminal Island, CA		
By: JHN	Date: 3/29/2022	Project: 6013
GSI ENVIRONMENTAL		**GSI Location Sample 4**

Picture not available

Sample 5: 12/22/2021

Picture not available

Sample 6: 12/22/2021

Picture not available

Sample 7: 12/22/2021

Picture not available

Sample 8: 12/22/2021

Attachment C
Sampling Photo Log
Pasha Stevedoring & Terminals
701 New Dock Street, Terminal Island, CA

By: JHN	Date: 3/29/2022	Project: 6013
GSI ENVIRONMENTAL		**GSI Location Sample 5 - 8**

Picture not available

Sample 9: 12/22/2021

Picture not available

Sample 10: 12/22/2021

Attachment C
Sampling Photo Log
Pasha Stevedoring & Terminals
701 New Dock Street, Terminal Island, CA

By: JHN	Date: 3/29/2022	Project: 6013
GSI ENVIRONMENTAL		**GSI Location Sample 9 & 10**

Sample 11: 12/22/2021

Attachment C **Sampling Photo Log** Pasha Stevedoring & Terminals 701 New Dock Street, Terminal Island, CA		
By: JHN	Date: 3/29/2022	Project: 6013
GSI ENVIRONMENTAL		**GSI Location Sample 11**

Sample 12: 2/14/2022

Sample 13: 2/14/2022

Sample 14: 2/14/2022

Attachment C
Sampling Photo Log
Pasha Stevedoring & Terminals
701 New Dock Street, Terminal Island, CA

By: JHN	Date: 3/29/2022	Project: 6013
GSI ENVIRONMENTAL		**GSI Location Sample 12 - 14**

Sample 15: 3/8/2022

Sample 16: 3/8/2022

Sample 17: 3/8/2022

Sample 18: 3/8/2022

Attachment C
Sampling Photo Log
Pasha Stevedoring & Terminals
701 New Dock Street, Terminal Island, CA

By: JHN	Date: 3/29/2022	Project: 6013
GSI ENVIRONMENTAL		**GSI Location Sample 15 - 18**

Sample 19: 3/14/2022

Sample 20: 3/14/2022

Sample 21: 3/14/2022

Sample 22: 3/14/2022

Attachment C
Sampling Photo Log
Pasha Stevedoring & Terminals
701 New Dock Street, Terminal Island, CA

By: CSJ	Date: 3/29/2022	Project: 6013
GSI ENVIRONMENTAL		**GSI Location Sample 19 - 22**

Sample 23: 3/15/2022

Sample 24: 3/15/2022

Sample 25: 3/15/2022

Sample 26: 3/15/2022

Attachment C
Sampling Photo Log
Pasha Stevedoring & Terminals
701 New Dock Street, Terminal Island, CA

By: CSJ	Date: 3/29/2022	Project: 6013
GSI ENVIRONMENTAL		**GSI Location Sample 23 - 26**

Sample 27: 3/15/2022

Sample 28: 3/15/2022

Sample 29: 3/15/2022

Sample 30: 3/15/2022

Attachment C
Sampling Photo Log
Pasha Stevedoring & Terminals
701 New Dock Street, Terminal Island, CA

By: CSJ	Date: 3/29/2022	Project: 6013
GSI ENVIRONMENTAL		**GSI Location Sample 27 - 30**

Sample 31: 3/16/2022

Sample 32: 3/16/2022

Sample 33: 3/16/2022

Sample 34: 3/16/2022

Attachment C
Sampling Photo Log
Pasha Stevedoring & Terminals
701 New Dock Street, Terminal Island, CA

By: CSJ	Date: 3/29/2022	Project: 6013
GSI ENVIRONMENTAL		**GSI Location Sample 31 - 34**

Sample 35: 3/16/2022

Sample 36: 3/16/2022

Attachment C
Sampling Photo Log
Pasha Stevedoring & Terminals
701 New Dock Street, Terminal Island, CA

By: CSJ	Date: 3/29/2022	Project: 6013
GSI ENVIRONMENTAL		**GSI Location Sample 35 &36**

Sample 40: 3/31/2022

Sample 41: 3/31/2022

Sample 42: 3/31/2022

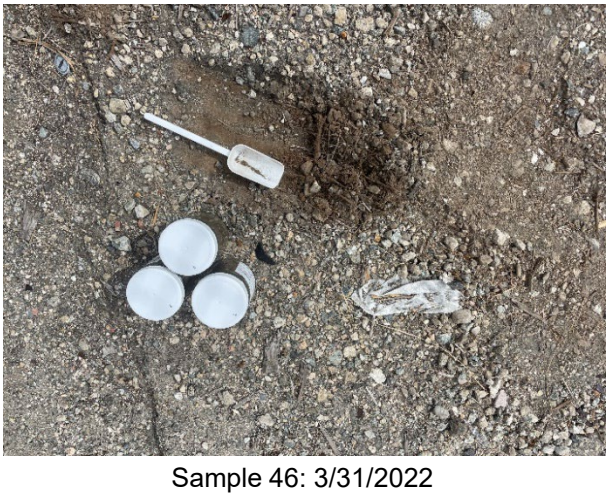
Sample 43: 3/31/2022

Attachment C
Sampling Photo Log
Pasha Stevedoring & Terminals
701 New Dock Street, Terminal Island, CA

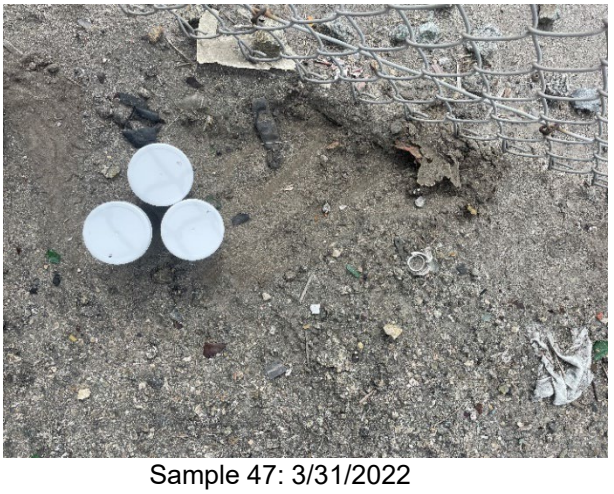
By: CSJ	Date: 4/1/2022	Project: 6013
GSI ENVIRONMENTAL		**GSI Location Sample 40 - 43**

Sample 44: 3/31/2022

Sample 45: 3/31/2022



Sample 46: 3/31/2022



Sample 47: 3/31/2022

Attachment C
Sampling Photo Log
Pasha Stevedoring & Terminals
701 New Dock Street, Terminal Island, CA

By: CSJ	Date: 4/1/2022	Project: 6013
GSI ENVIRONMENTAL		**GSI Location Sample 44 - 47**

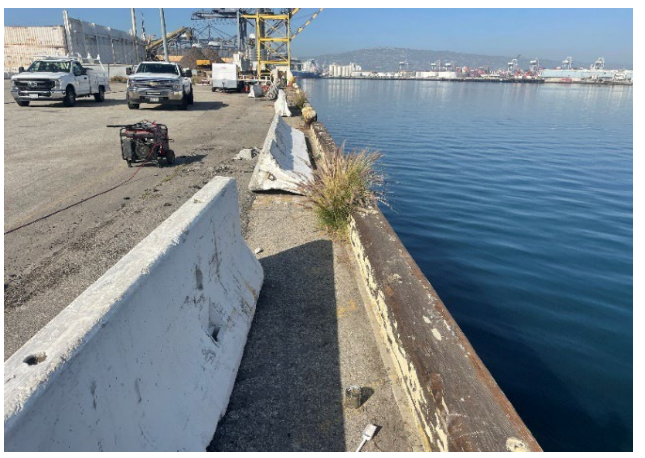
Sample 48: 3/31/2022

Attachment C
Sampling Photo Log
Pasha Stevedoring & Terminals
701 New Dock Street, Terminal Island, CA

By: CSJ	Date: 4/1/2022	Project: 6013
GSI ENVIRONMENTAL		**GSI Location Sample 48**

Sample 49: 4/6/2022

Sample 50: 4/6/2022



Sample 49: 4/6/2022

Sample 50: 4/6/2022

Sample 49: 4/6/2022

Sample 50: 4/6/2022

Attachment C
Sampling Photo Log
Pasha Stevedoring & Terminals

By: GFM	Date: 4/19/2022	Project: 6013
GSI ENVIRONMENTAL		**GSI Location Sample 49-50**

Sample 51: 4/11/2022

Sample 52: 4/11/2022

Sample 51: 4/11/2022

Sample 52: 4/11/2022

Sample 51: 4/11/2022

Sample 52: 4/11/2022

Attachment C
Sampling Photo Log
Pasha Stevedoring & Terminals

By: GFM	Date: 4/19/2022	Project: 6013
GSI ENVIRONMENTAL		**GSI Location Sample 51-52**

Sample 53: 4/11/2022

Sample 54: 4/13/2022

Sample 53: 4/11/2022

Sample 54: 4/13/2022

Sample 53: 4/11/2022

Sample 54: 4/13/2022

Attachment C
Sampling Photo Log
Pasha Stevedoring & Terminals

By: GFM	Date: 4/19/2022	Project: 6013
GSI ENVIRONMENTAL		**GSI Location Sample 53-54**

Sample 55: 4/13/2022

Sample 56: 4/13/2022

Sample 55: 4/13/2022

Sample 56: 4/13/2022

Sample 55: 4/13/2022

Sample 56: 4/13/2022

Attachment C
Sampling Photo Log
Pasha Stevedoring & Terminals

By: GFM	Date: 4/19/2022	Project: 6013
GSI ENVIRONMENTAL		**GSI Location Sample 55-56**

Sample 57: 4/14/2022

Sample 58: 4/14/2022

Sample 57: 4/14/2022

Sample 58: 4/14/2022

Sample 57: 4/14/2022

Sample 58: 4/14/2022

Attachment C
Sampling Photo Log
Pasha Stevedoring & Terminals

By: GFM	Date: 4/19/2022	Project: 6013
GSI ENVIRONMENTAL		**GSI Location Sample 57-58**

Sample 59: 4/14/2022

Sample 59: 4/14/2022

Sample 60: 4/15/2022

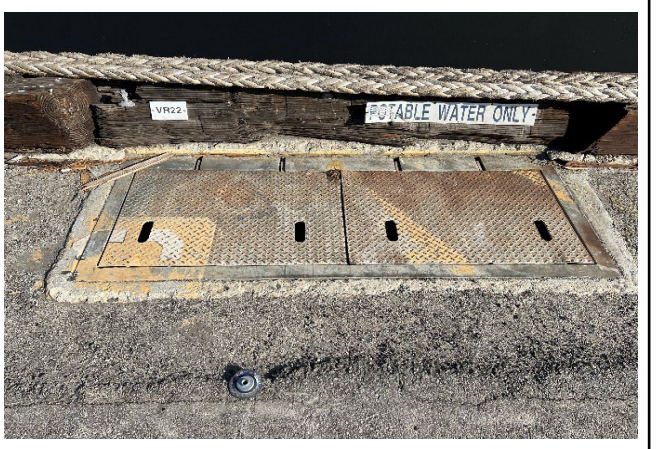
Sample 59: 4/14/2022

Sample 60: 4/15/2022

Attachment C
Sampling Photo Log
Pasha Stevedoring & Terminals

By: GFM	Date: 4/19/2022	Project: 6013
GSI ENVIRONMENTAL		**GSI Location Sample 59-60**

Sample 61: 4/15/2022



Sample 62: 4/15/2022

Sample 61: 4/15/2022

Sample 62: 4/15/2022

Sample 61: 4/15/2022

Sample 62: 4/15/2022

Attachment C
Sampling Photo Log
Pasha Stevedoring & Terminals

By: GFM	Date: 4/19/2022	Project: 6013
GSI ENVIRONMENTAL		**GSI Location Sample 61-62**

Sample 63: 4/18/2022

Sample 64: 4/18/2022

Sample 63: 4/18/2022

Sample 64: 4/18/2022

Sample 63: 4/18/2022

Sample 64: 4/18/2022

Attachment C
Sampling Photo Log
Pasha Stevedoring & Terminals

By: GFM	Date: 4/19/2022	Project: 6013
GSI ENVIRONMENTAL		**GSI Location Sample 63-64**

Off-Site LFM Interim Cleanup and Sampling Results Memorandum
901 New Dock Street
Terminal Island, California 90731

ATTACHMENT D

Waste Manifests

Please print or type. Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
CAC003145852	1	(800) 535-5053	020428873 JJK

5. Generator's Name and Mailing Address
SA Recycling, LLC
901 New Dock Street, San Pedro, CA 90731
Generator's Phone: Attn: Lindsay Maine (714) 631-2031

Generator's Site Address (if different than mailing address)
SA Recycling, LLC
701 New Dock Street, San Pedro, CA 90731

6. Transporter 1 Company Name
E.C.T.I. PO Box 7318 San Bernardino, CA 92411 (800) 664-7773
U.S. EPA ID Number: CAR000049064

7. Transporter 2 Company Name
U.S. EPA ID Number:

8. Designated Facility Name and Site Address
US Ecology
HWY 95, 11 MILES SOUTH OF BEATTY, BEATTY, NV 89003
Facility's Phone: (800)-239-3943
U.S. EPA ID Number: NVT330010000

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes		
	1. Non-RCRA Hazardous Waste, Solid (Lead & Zinc)	2	DM	400	P Y	611		
	2.							
	3.							
	4.							

14. Special Handling Instructions and Additional Information
Profile #
INFOTRAC Account: 84412
ICS: SC-21-1340
Wear appropriate Personal Protective Equipment when handling, as necessary

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Rogelio (Ray) Hernandez
Signature: Rogelio Hernandez
Month 10 Day 29 Year 21

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Anthony Miranda
Signature:
Month 10 Day 29 Year 21
Transporter 2 Printed/Typed Name:
Signature:
Month Day Year

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:

18b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator)
Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name Signature Month Day Year

GENERATOR | INT'L | TRANSPORTER | DESIGNATED FACILITY

Please print or type. Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST	1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
	CAC003145852	1	(800) 535-5053	020428873 JJK

GENERATOR

5. Generator's Name and Mailing Address
SA Recycling, LLC
901 New Dock Street, San Pedro, CA 90731
Generator's Phone: Attn: Lindsay Maine (714) 631-2031

Generator's Site Address (if different than mailing address)
SA Recycling, LLC
701 New Dock Street, San Pedro, CA 90731

6. Transporter 1 Company Name
E.C.T.I. PO Box 7318 San Bernardino, CA 92411 (800) 664-7773
U.S. EPA ID Number: CAR000049064

7. Transporter 2 Company Name
U.S. EPA ID Number

8. Designated Facility Name and Site Address
US Ecology
HWY 95, 11 MILES SOUTH OF BEATTY, BEATTY, NV 89003
Facility's Phone: (800)-239-3943
U.S. EPA ID Number: NVT330010000

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
	1. Non-RCRA Hazardous Waste, Solid (Lead & Zinc)	2	DM	400	P Y	611
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information
Profile #
INFOTRAC Account: 84412
ICS: SC-21-1340
Wear appropriate Personal Protective Equipment when handling, as necessary

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Rogelio (Ray) Hernandez
Signature: [signature]
Month 10 Day 29 Year 21

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Anthony Miranda
Signature: [signature]
Month 10 Day 29 Year 21
Transporter 2 Printed/Typed Name
Signature
Month Day Year

DESIGNATED FACILITY

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:

18b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator)
Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name
Signature
Month Day Year

Please print or type. Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST	1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
	CAC003145852	1	(800) 535-5053	020428873 JJK

5. Generator's Name and Mailing Address
SA Recycling, LLC
901 New Dock Street, San Pedro, CA 90731
Generator's Phone: Attn: Lindsay Maine (714) 631-2031

Generator's Site Address (if different than mailing address)
SA Recycling, LLC
701 New Dock Street, San Pedro, CA 90731

6. Transporter 1 Company Name
E.C.T.I. PO Box 7318 San Bernardino, CA 92411 (800) 664-7773
U.S. EPA ID Number: CAR000049064

7. Transporter 2 Company Name
U.S. EPA ID Number:

8. Designated Facility Name and Site Address
US Ecology
HWY 95, 11 MILES SOUTH OF BEATTY, BEATTY, NV 89003
Facility's Phone: (800)-239-3943
U.S. EPA ID Number: NVT330010000

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
	1. Non-RCRA Hazardous Waste, Solid (Lead & Zinc)	2	DM	400	P Y	611
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information
Profile #
INFOTRAC Account: 84412
ICS: SC-21-1340
Wear appropriate Personal Protective Equipment when handling, as necessary

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Rogelio (Ray) Hernandez
Signature: [signature]
Month 10 Day 29 Year 21

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Anthony Miranda
Signature: [signature]
Month 10 Day 29 Year 21
Transporter 2 Printed/Typed Name:
Signature:
Month Day Year

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:

18b. Alternate Facility (or Generator)
U.S. EPA ID Number:
Facility's Phone:

18c. Signature of Alternate Facility (or Generator)
Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name
Signature
Month Day Year

GENERATOR — INT'L — TRANSPORTER — DESIGNATED FACILITY

ECTI
ENVIRONMENTAL CONTRACTORS TRANSPORTATION, INC.

P.O. Box 7318
San Bernardino, CA 92411
Phone (909) 884-7424
Fax (909) 884-3744

NON-HAZARDOUS WASTE MANIFEST

1. Generator US EPA ID No.	2. Page 1 of	3. Emergency Response Phone No.	4. Manifest No.
CAC003157830	1	800-535-5053	122004

5. Generator's Name and Mailing Address
SA RECYCLING, LLC
901 NEW DOCK ST
SAN PEDRO, CA 90731
Generator's Phone No: 714-631-2031

Generator's Site Address (if different than mailing address in item 5)
1001 NEW DOCK ST
SAN PEDRO, CA 90731

6. Transporter No. 1 Company Name
E.C.T.I. PO BOX 7318 San Bernardino, CA 92411 (800)664-7773
U.S. EPA ID No. CAR000049064

7. Transporter No. 2 Company Name
U.S. EPA ID No.

8. Designated Facility Name and Site Address
US Ecology
Hwy 95 - 11 Miles South of Beatty
Beatty, NV 89003
Facility's Phone No. 800-239-3943
U.S. EPA ID No. NVT330010000

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	
a.	NON-HAZARDOUS WASTE,SOLID(SEDIMENT WITH METALS)	1	DM	500	P	
b.						
c.						
d.						

13. Special Handling Instructions and Additional Information
WEAR PROPER PPE WHEN HANDLING
PROFILE
INFOTRAC ACCOUNT#84412
1X55gallon Drum

14. GENERATOR'S/OFFEROR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Generator's/Offeror's Typed/Printed Name: Jesus G Araya
Signature:
Month 1 Day 24 Year 22

15. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Typed/Printed Name: BRADLEY Huttman
Signature:
Month 1 Day 24 Year 22

Transporter 2 Typed/Printed Name: BRADLEY Huttman
Signature:
Month Day Year

16. Discrepancy

16a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference No:

16b. Alternate Facility (or Generator)
U.S. EPA ID No.
Facility's Phone No.:

16c. Signature of Alternate Facility (or Generator)
Month Day Year

17. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 16a

Typed/Printed Name
Signature
Month Day Year

GENERATOR
TRANSPORTER
DESIGNATED FACILITY

ORIGINAL-RETURN TO GENERATOR

Please print or type

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: CAC003157830
2. Page 1 of 1
3. Emergency Response Phone: 800-535-5053
4. Manifest Tracking Number: 016575795 FLE

5. Generator's Name and Mailing Address
SA RECYCLING, LLC
901 NEW DOCK ST
SAN PEDRO, CA 90731
Generator's Phone: 714-631-2031

Generator's Site Address (if different than mailing address)
701 NEW DOCK ST
SAN PEDRO, CA 90731

6. Transporter 1 Company Name: E.C.T.I. PO BOX 7318 San Bernardino, CA 92411 (800)664-7773
U.S. EPA ID Number: CAR000049064

7. Transporter 2 Company Name
U.S. EPA ID Number

8. Designated Facility Name and Site Address
US Ecology
Hwy 95 -11 Miles South of Beatty
Beatty, NV 89003
Facility's Phone: 800-239-3943
U.S. EPA ID Number: NVT330010000

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
	1. NON-RCRA HAZARDOUS WASTE, SOLID	29	DM	23,500	P	611
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information
WEAR PROPER PPE WHEN HANDLING
PROFILE:070128300-16364
INFOTRAC ACCOUNT#84412
29X55gallon Drum

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Jesus G Anaya
Signature
Month 1 Day 24 Year 22

INT'L
16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER
17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: BRADLEY Huffmen
Signature
Month 1 Day 24 Year 22
Transporter 2 Printed/Typed Name
Signature
Month Day Year

DESIGNATED FACILITY
18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:
18c. Signature of Alternate Facility (or Generator)
Month Day Year
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. 2. 3. 4.
20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name
Signature
Month Day Year

Please print or type

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: CAC003157830
2. Page 1 of: 1
3. Emergency Response Phone: 800-535-5053
4. Manifest Tracking Number: 016575794 FLE

5. Generator's Name and Mailing Address
SA RECYCLING, LLC
901 NEW DOCK ST
SAN PEDRO, CA 90731

Generator's Site Address (if different than mailing address)
1001 NEW DOCK ST
SAN PEDRO, CA 90731

Generator's Phone 714-631-2031

6. Transporter 1 Company Name: E.C.T.I. PO BOX 7318 San Bernardino, CA 92411 (800)664-7773
U.S. EPA ID Number: CAR000049064

7. Transporter 2 Company Name
U.S. EPA ID Number

8. Designated Facility Name and Site Address
US Ecology
Hwy 95 -11 Miles South of Beatty
Beatty, NV 89003
U.S. EPA ID Number: NVT330010000

Facility's Phone 800-239-3943

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
	1. NON-RCRA HAZARDOUS WASTE, SOLID	5	DM	4,000	P	611
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information
WEAR PROPER PPE WHEN HANDLING
PROFILE:070128300-16364
INFOTRAC ACCOUNT#84412
5X55gallon Drum

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Jesus G Anaya
Signature
Month 1 Day 24 Year 22

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: BRADLEY Huffman
Signature
Month 1 Day 24 Year 22

Transporter 2 Printed/Typed Name
Signature
Month Day Year

DESIGNATED FACILITY

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator)
U.S. EPA ID Number

Facility's Phone

18c. Signature of Alternate Facility (or Generator)
Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1. 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name
Signature
Month Day Year

EPA Form 8700-22 (Rev. 12-17) Previous editions are obsolete.

DESIGNATED FACILITY TO EPA's e-MANIFEST SYSTEM

ECTI
ENVIRONMENTAL CONTRACTORS TRANSPORTATION, INC.
P.O. Box 7318
San Bernardino, CA 92411
Phone (909) 884-7424
Fax (909) 884-3744

NON-HAZARDOUS WASTE MANIFEST

1. Generator US EPA ID No: CAC003157830
2. Page 1 of 1
3. Emergency Response Phone No: 800-535-5053
4. Manifest No: 122006

5. Generator's Name and Mailing Address: SA RECYCLING, LLC, 901 NEW DOCK ST, SAN PEDRO, CA 90731
Generator's Site Address (if different than mailing address in item 5): 701 NEW DOCK ST, SAN PEDRO, CA 90731
Generator's Phone No: 714-631-2031

6. Transporter No. 1 Company Name: E.C.T.I. PO BOX 7318 San Bernardino, CA 92411 (800)664-7773
U.S. EPA ID No: CAR000049064

7. Transporter No. 2 Company Name:
U.S. EPA ID No:

8. Designated Facility Name and Site Address: US Ecology, Hwy 95 -11 Miles South of Beatty, Beatty, NV 89003
U.S. EPA ID No: NVT330010000
Facility's Phone No: 800-239-3943

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	
a	NON-HAZARDOUS WASTE,LIQUID	1	DM	55	G	
b						
c						
d						

13. Special Handling Instructions and Additional Information
WEAR PROPER PPE WHEN HANDLING
PROFILE
INFOTRAC ACCOUNT#84412
1X55gallon Drum

14. GENERATOR'S/OFFEROR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Generator's/Offeror's Typed/Printed Name: Jesus G Anaya
Signature:
Month Day Year: 11 24 22

15. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Typed/Printed Name: Bradley Huffman
Signature:
Month Day Year: 11 24 22
Transporter 2 Typed/Printed Name:
Signature:
Month Day Year:

16. Discrepancy
16a. Discrepancy Indication Space: ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference No:
16b. Alternate Facility (or Generator)
U.S. EPA ID No.
Facility's Phone No.
16c. Signature of Alternate Facility (or Generator)
Month Day Year

17. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in item 16a
Typed/Printed Name
Signature
Month Day Year

GENERATOR
TRANSPORTER
DESIGNATED FACILITY

ORIGINAL-RETURN TO GENERATOR

ECTI
ENVIRONMENTAL CONTRACTORS TRANSPORTATION, INC.
P.O. Box 7318
San Bernardino, CA 92411
Phone (909) 884-7424
Fax (909) 884-3744

NON-HAZARDOUS WASTE MANIFEST

1. Generator US EPA ID No: CAC003157830
2. Page 1 of 1
3. Emergency Response Phone No: 800-535-5053
4. Manifest No: 122005

5. Generator's Name and Mailing Address: SA RECYCLING, LLC, 901 NEW DOCK ST, SAN PEDRO, CA 90731
Generator's Site Address (if different than mailing address in item 5): 1001 NEW DOCK ST, SAN PEDRO, CA 90731
Generator's Phone No: 714-631-2031

6. Transporter No. 1 Company Name: E.C.T.I. PO BOX 7318 San Bernardino, CA 92411 (800)664-7773
U.S. EPA ID No.: CAR000049064

7. Transporter No. 2 Company Name:
U.S. EPA ID No.:

8. Designated Facility Name and Site Address: US Ecology, Hwy 95 -11 Miles South of Beatty, Beatty, NV 89003
U.S. EPA ID No.: NVT330010000
Facility's Phone No: 800-239-3943

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	
a.	NON-HAZARDOUS WASTE, LIQUID	6	DM	330	G	
b.						
c.						
d.						

13. Special Handling Instructions and Additional Information
WEAR PROPER PPE WHEN HANDLING
PROFILE:
INFOTRAC ACCOUNT#84412
6 X 55 gallon Drums

14. GENERATOR'S/OFFEROR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Generator's/Offeror's Typed/Printed Name: Jesus G Anaya
Signature:
Month 1 Day 24 Year 22

15. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Typed/Printed Name: BRADLEY Huffman
Signature:
Month 1 Day 24 Year 22
Transporter 2 Typed/Printed Name:
Signature:
Month Day Year

16. Discrepancy
16a. Discrepancy Indication Space: ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference No:
16b. Alternate Facility (or Generator)
U.S. EPA ID No.
Facility's Phone No.:
16c. Signature of Alternate Facility (or Generator)
Month Day Year

17. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in item 16a
Typed/Printed Name
Signature
Month Day Year

GENERATOR
TRANSPORTER
DESIGNATED FACILITY

ORIGINAL -RETURN TO GENERATOR

Please print or type.

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
CAC003157830	1	800-535-5053	016575819 FLE

5. Generator's Name and Mailing Address
SA RECYCLING, LLC
901 NEW DOCK ST
SAN PEDRO, CA 90731
Generator's Phone: 714-631-2031

Generator's Site Address (if different than mailing address)
701 NEW DOCK ST
SAN PEDRO, CA 90731

6. Transporter 1 Company Name: E.C.T.I. PO BOX 7318 San Bernardino, CA 92411 (800)664-7773
U.S. EPA ID Number: CAR000049064

7. Transporter 2 Company Name
U.S. EPA ID Number

8. Designated Facility Name and Site Address
US Ecology
Hwy 95 -11 Miles South of Beatty
Beatty, NV 89003
Facility's Phone: 800-239-3943
U.S. EPA ID Number: NVT330010000

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
	1. NON-RCRA HAZARDOUS WASTE SOLID (LEAD AND ZINC)	33	Dm	16,500	P	611
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information
WEAR PROPER PPE WHEN HANDLING
PROFILE:070128300-16364
INFOTRAC ACCOUNT#84412
33X55gallon Drums

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

GENERATOR

Generator's/Offeror's Printed/Typed Name: Jesus G Anaya
Signature
Month 1 Day 31 Year 22

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: BRADLEY Huffman
Signature
Month 1 Day 31 Year 22

Transporter 2 Printed/Typed Name
Signature
Month Day Year

DESIGNATED FACILITY

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator)
Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name
Signature
Month Day Year

EPA Form 8700-22 (Rev. 12-17) Previous editions are obsolete.

DESIGNATED FACILITY TO EPA's e-MANIFEST SYSTEM

START TIME
5:00 AM

ECTI
ENVIRONMENTAL CONTRACTORS TRANSPORTATION, INC.

Service Order

153810

D: BRADLEY HUFFMAN T: 101 Stop: 1 Trlr: 80 Nva
JR & Fellis

Customer: INNOVATIVE CONSTRUCTION SOLUTIONS	Date: 1-26-2022
	P.O. #: SC-21-1402
Site Location: 701 New Dock Street San Pedro	Job #:
	Requested by:
	Time: Start @ 5:30am

Services to be performed: P/UP DRUMS .P/UP-40x55gDM..	Service Date: 1-31-2022
	Service Time: 8:00 am
	Job Site Contact: BIANCA
	Contact Phone#: (808) 561-0775
	C.O.D.

Haz ☑ Non Haz ☐ Manifest supplied by: ECTI ☐ Customer ☐ Labels ☐ Manifest # 016575819FLE

Landfill: ~~NONE~~ USE NV Manifest #

Left Yard	Arrived at Job Site	Departed Job Site	Arrived at Landfill	Departed Landfill	Arrived at Yard
	0800	0930			

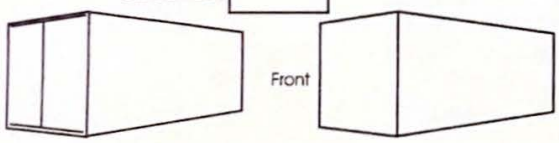
Services Performed By Driver: P/UP 33X55gallon Drum's

Container #'s		
Del/WTL	#	#
P/U	# 33Dm	#
Relocate	#	#

Comments: Delays, Overweight, Dry Run, Ect...

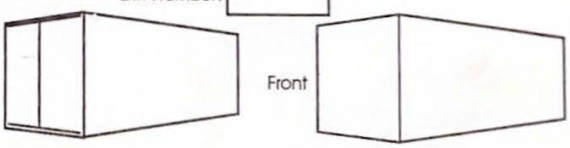
ENVIRONMENTAL CONTRACTORS TRANSPORTATION, INC. (ECTI) IS NOT RESPONSIBLE FOR DAMAGE CAUSED DURING DELIVERY PLACEMENT, PICKUP OR RELOCATING OF ANY CONTAINER ON THE JOB SITE:(I.E. SIDEWALK, DRIVEWAY, LAWN, PAVEMENT, UNDERGROUND UTILITIES). CUSTOMER IS RESPONSIBLE FOR DIRECTING APPROVED PLACEMENT OF CONTAINER(S) ON THE JOB SITE. Initial here: X J. A

Container Inspection: You must wear your respirator anytime you go inside the box to clean or line it!



Bin Number: ☐ Back Front

Bin Number: ☐ Back Front



	Del's	P/U's
Do all doors, lids and binders work properly?		
Is the inside of the container clean and free of holes?		
Is there graffiti on the container?		
Are there ECTI stickers on both sides?		

Driver Signature: [signature] Truck# 101 Trailer# 80
Print Name: BRADley Huffman

Customer Signature: [signature] Print Name: Jesus Anaya

P.O. Box 7318, San Bernardino, CA 92411 • Phone (909) 884-7424 • Fax (909) 884-3744

White-Original Canary-Customer Billing Pink-Customer Copy Gold-Duplicate Copy

ECTI
ENVIRONMENTAL CONTRACTORS TRANSPORTATION, INC.

Service Order

154032

D: BRADLEY HUFFMAN T: 101 Stop: 1 Trl: 70

Chris Caskey

Customer: INNOVATIVE CONSTRUCTION SOLUTIONS	Date: 2-7-2022
	P.O. #: SC-21-1402
Site Location: 701 New Dock Street San Pedro	Job #:
	Requested by:
	Time: Start @ 5:45am

Services to be performed: P/UP DRUMS .P/UP-66x55gDM..	Service Date: 2-8-2022 Service Time: 8:00 am Job Site Contact: BIANCA Contact Phone#: (808) 561-0775 C.O.D.

Haz ☑ Non Haz ☐ Manifest supplied by: ECTI ☐ Customer ☐ Labels ☐ Manifest # 015014514FLE

Landfill: ~~NONE~~ USENV Manifest #

Left Yard	Arrived at Job Site	Departed Job Site	Arrived at Landfill	Departed Landfill	Arrived at Yard
	0900	1045			

Services Performed By Driver: P/UP 66X55gallon Drum's

Container #'s		
Del/WTL	#	#
P/U	# 66 Dm	#
Relocate	#	#

Comments: Delays, Overweight, Dry Run, Ect...

ENVIRONMENTAL CONTRACTORS TRANSPORTATION, INC. (ECTI) IS NOT RESPONSIBLE FOR DAMAGE CAUSED DURING DELIVERY PLACEMENT, PICKUP OR RELOCATING OF ANY CONTAINER ON THE JOB SITE:(I.E. SIDEWALK, DRIVEWAY, LAWN, PAVEMENT, UNDERGROUND UTILITIES). CUSTOMER IS RESPONSIBLE FOR DIRECTING APPROVED PLACEMENT OF CONTAINER(S) ON THE JOB SITE. Initial here: X J. A

Container Inspection: You must wear your respirator anytime you go inside the box to clean or line it!

Bin Number: ☐ Back Front

Bin Number: ☐ Back Front

	Del's	P/U's
Do all doors, lids and binders work properly?		
Is the inside of the container clean and free of holes?		
Is there graffiti on the container?		
Are there ECTI stickers on both sides?		

Truck# 101 Trailer# 70

Driver Signature: Print Name: BRADLEY Huffman

Customer Signature: Print Name: Jesus Anaya

P.O. Box 7318, San Bernardino, CA 92411 • Phone (909) 884-7424 • Fax (909) 884-3744

White-Original Canary-Customer Billing Pink-Customer Copy Gold-Duplicate Copy

ECTI
ENVIRONMENTAL CONTRACTORS TRANSPORTATION, INC.

Service Order

154032

D: BRADLEY HUFFMAN T: 101 Stop: 1 Trl: 70

Chris Caskey

Customer: INNOVATIVE CONSTRUCTION SOLUTIONS	Date: 2-7-2022
	P.O. #: SC-21-1402
Site Location: 701 New Dock Street San Pedro	Job #:
	Requested by:
	Time: Start @ 5:45am

Services to be performed: P/UP DRUMS .P/UP-66x55gDM..	Service Date: 2-8-2022 Service Time: 8:00 am Job Site Contact: BIANCA Contact Phone#: (808) 561-0775 C.O.D.

Haz ☑ Non Haz ☐ Manifest supplied by: ECTI ☐ Customer ☐ Labels ☐ Manifest # 015014514FLE

Landfill: ~~NONE~~ USENV Manifest #

Left Yard	Arrived at Job Site	Departed Job Site	Arrived at Landfill	Departed Landfill	Arrived at Yard
	0900	1045			

Services Performed By Driver: P/UP 66X55gallon Drum's

Container #'s		
Del/WTL	#	#
P/U	# 66 Dm	#
Relocate	#	#

Comments: Delays, Overweight, Dry Run, Ect...

ENVIRONMENTAL CONTRACTORS TRANSPORTATION, INC. (ECTI) IS NOT RESPONSIBLE FOR DAMAGE CAUSED DURING DELIVERY PLACEMENT, PICKUP OR RELOCATING OF ANY CONTAINER ON THE JOB SITE:(I.E. SIDEWALK, DRIVEWAY, LAWN, PAVEMENT, UNDERGROUND UTILITIES). CUSTOMER IS RESPONSIBLE FOR DIRECTING APPROVED PLACEMENT OF CONTAINER(S) ON THE JOB SITE. Initial here: X J. A

Container Inspection: You must wear your respirator anytime you go inside the box to clean or line it!

Bin Number: ☐ Back Front

Bin Number: ☐ Back Front

	Del's	P/U's
Do all doors, lids and binders work properly?		
Is the inside of the container clean and free of holes?		
Is there graffiti on the container?		
Are there ECTI stickers on both sides?		

Truck# 101 Trailer# 70

Driver Signature: Print Name: BRADLEY Huffman

Customer Signature: Print Name: Jesus Anaya

P.O. Box 7318, San Bernardino, CA 92411 • Phone (909) 884-7424 • Fax (909) 884-3744

White-Original Canary-Customer Billing Pink-Customer Copy Gold-Duplicate Copy

777

Please print or type.

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
CAC003157830	1	800-535-5053	015014514 FLE

5. Generator's Name and Mailing Address
SA RECYCLING, LLC
901 NEW DOCK ST
SAN PEDRO, CA 90731
Generator's Phone: 714-631-2031

Generator's Site Address (if different than mailing address)
701 NEW DOCK ST.
SAN PEDRO, CA 90731

6. Transporter 1 Company Name: E.C.T.I. — U.S. EPA ID Number: CAR000049004

7. Transporter 2 Company Name: APO Trucking — U.S. EPA ID Number: CAR000045563

8. Designated Facility Name and Site Address
US Ecology
Hwy 95 -11 Miles South of Beatty
Beatty, NV 89003
Facility's Phone: 800-239-3943
U.S. EPA ID Number: NVT330010000

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
	1. NON-RCRA HAZARDOUS WASTE, SOLID(SOIL WITH METAL)	26	DM	9,500	P	611
	2. NON- HAZARDOUS WASTE,LIQUID(RAINWATER WITH SEDIMENT)	40	DM	2,000	G	
	3.					
	4.					

14. Special Handling Instructions and Additional Information
WEAR PROPER PPE WHEN HANDLING INFOTRAC ACCOUNT#84412 66X55gallon Drums
PROFILE:9B1.070128300-16364 9B2. 070137747-17576

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Jesus G Anaya — Signature: [signature] — Month 2 Day 8 Year 22

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Bradley Hoffman — Signature: [signature] — Month 2 Day 8 Year 22
Transporter 2 Printed/Typed Name: Roger Bayardi — Signature: [signature] — Month 2 Day 11 Year 22

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:
18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. H132 2. H039 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Larissa Downie — Signature: [signature] — Month 2 Day 11 Year 22

GENERATOR — INT'L — TRANSPORTER — DESIGNATED FACILITY

EPA Form 8700-22 (Rev. 12-17) Previous editions are obsolete.

TRANSPORTER COPY

SOUTH YUMA COUNTY LANDFILL

Waste Stream Details

ID	d6ad2ae4-c0e1-4106-9fbb-7d8d09f7e206
Name	Green Waste with Trace Lead
Generator	SA Recycling LLC – SA Recycling LLC 901 NEW DOCK ST, TERMINAL ISLAND, CA 90731 (714) 283-6188 County: Los Angeles EPA ID: CAL000338569
Service Provider	ECTI – ECTI 953 Reece St., San Bernardino, CA 92411 (800) 664-7773 County: San Bernardino
Transporter	ECTI – ECTI 953 Reece St., San Bernardino, CA 92411 (800) 664-7773 County: San Bernardino
Billing	ECTI – ECTI PO Box 7318, San Bernardino, CA 92411 (800) 664-7773 County: San Bernardino EPA ID: CAR000049064
Facility	CR&R – South Yuma County Landfill 19536 South Avenue 1E, Yuma AZ 85365, Yuma, AZ 85365 (928) 341-9300 County: Yuma EPA ID: AZR000506980 State ID: AZR000506980
Updated	02/28/22

Material Origin

Address	SA Recycling LLC – SA Recycling LLC 901 NEW DOCK ST, TERMINAL ISLAND, CA 90731 (714) 283-6188 County: Los Angeles
EPA ID	CAL000338569
State ID	

Waste Description

EPA Hazardous?	☐ Yes ☑ No
DOT Hazardous Material?	☐ Yes ☑ No
State Hazardous Waste?	☑ Yes ☐ No
Non-hazardous due to treatment, delisting, or exclusion?	☐ Yes ☑ No

From an industry regulated under Benzene NESHAP?	☐ Yes ☑ No
Regulated, Licensed or NORM Radioactive Waste?	☐ Yes ☑ No
Contains PCBs?	☐ Yes ☑ No
Regulated and/or Untreated Medical/Infectious Waste?	☐ Yes ☑ No
Contains Asbestos?	☐ Yes ☑ No
Subject to RCRA Subpart CC controls?	☐ Yes ☑ No

Shipping Description

Shipping Description (including Proper Shipping Name)	NON RCRA HAZARDOUS WASTE, SOLID (GREEN WASTE WITH TRACE LEAD)

Material Details

Is this an Industrial Waste Stream?	No
Common Name	Plant Trash
Generation Process	SITE CLEAN UP
Preferred Disposal Methods	H131
Contamination Source	UNKNOWN

Material Composition

Constituents	GREEN WASTE: 95% – 100% SEDIMENT: 0% – 10%
Color	GREEN/BROWN
Physical State at 70°F	⊙ Solid ○ Liquid ○ Sludge ○ Dust ○ Other
Description	*To be completed when* Physical State at 70°F *is* Other _____
Free Liquid Range	*To be completed when* Physical State at 70°F *is* Liquid, Sludge or Other _____ – _____
pH	_____ – _____
Strong Odor	No
Describe Odor	*To be completed when* Strong Odor *is* Yes _____
Reactivity	No
Reactivity Explanation	*To be completed when* Reactivity *is* Yes _____
Flash Point	○ < 140°F ○ 140°F - 199°F ○ ≥ 200°F ⊙ N/A

EPA Hazardous Information

To be completed when EPA Hazardous? *is* Yes

Characteristic Waste	_____ : _____ _____ : _____ _____ : _____
Listed Codes	_____
Is this material subject to the Alternative DEBRIS standards (40 CFR 268.45)?	_____
Is this material subject to the Alternative SOIL standards (40 CFR 268.49)?	_____
Underlying Hazardous Constituent	*To be completed when* Is this material subject to the Alternative SOIL standards (40 CFR 268.49)? *is* Yes _____ _____ _____
Is this material exempt from Subpart CC controls (40 CFR 264.1083)?	_____
Reason	*To be completed when* Is this material exempt from Subpart CC controls (40 CFR 264.1083)? *is* Yes ○ Waste meets LDR or treatment exemptions for organics (40 CFR 264.1082(c) or (c)(4)) ○ Waste contains VOCs that average <500 ppmw (40 CFR 264.1082(c)(1)). [Will require annual update]

EPA Non-Hazardous Information

To be completed when EPA Hazardous? *is* No

Process Knowledge	☐ Yes ☑ No
SDS	☐ Yes ☑ No
Certified Analytical Report	☐ Yes ☑ No
Exempt Waste	☐ Yes ☑ No
Process Details	*To be completed when* Process Knowledge *is* Yes _____
Is the data derived from testing a representative sample according with 40 CFR 261 and/or other applicable laws?	*To be completed when* Certified Analytical Report *is* Yes _____
Type of Analytical Sample	*To be completed when* Is the data derived from testing a representative sample according with 40 CFR 261 and/or other applicable laws? *is* Yes ○ Composite ○ Grab
Sample ID #	*To be completed when* Is the data derived from testing a representative sample according with 40 CFR 261 and/or other applicable laws? *is* Yes _____
Applicable Exempt Waste Item	*To be completed when* Exempt Waste *is* Yes ○ UST Corrective Action - 40 CFR 261.4 (b)(10) ○ PCB Bulk Product Waste - 40 CFR 761.62 ○ Oil & Gas E&P Waste - 40 CFR 261.4 (b)(5) ○ RCRA-Empty Containers - 40 CFR 261.7 ○ Other
Provided Reference	*To be completed when* Applicable Exempt Waste Item *is* Other _____

Non-Hazardous Waste

To be completed when Non-hazardous due to treatment, delisting, or exclusion? *is* Yes

What type of non-hazardous waste is this?	◯ Delisted Hazardous Waste ◯ Treated Hazardous Waste Debris ◯ Excluded Waste under 40 CFR 261.4 ◯ Treated Characteristic Hazardous Waste
Specify Exclusions	*To be completed when* What type of non-hazardous waste is this? *is* Excluded Waste under 40 CFR 261.4

State Waste Information

State Waste Codes	181

Benzene Information

To be completed when From an industry regulated under Benzene NESHAP? *is* Yes

Are you a TSDF?	
To be completed when Are you a TSDF? is Yes *Please complete the Benzene NESHAP questionnaire*	
Does this material contain benzene?	*To be completed when* Are you a TSDF? *is* No
Flow Weighted Average Concentration in PPMW	*To be completed when* Does this material contain benzene? *is* Yes
What is your current facility's total annual benzene quantity in megagrams?	*To be completed when* Are you a TSDF? *is* No ◯ Less than (<) 1 Mg ◯ 1 - 9.99 Mg ◯ More than (>) 10Mg
Is this waste soil from a remediation?	*To be completed when* Are you a TSDF? *is* No
Benzene Concentration in PPMW	*To be completed when* Is this waste soil from a remediation? *is* Yes
Does the waste contain more than (>) 10% water/moisture?	*To be completed when* Are you a TSDF? *is* No
Has material been treated to remove 99% of the benzene or to achieve less than 10ppmw?	*To be completed when* Are you a TSDF? *is* No
Is material exempt from controls in accordance with 40 CFR 61.342?	*To be completed when* Are you a TSDF? *is* No
Specify Exemption	*To be completed when* Is material exempt from controls in accordance with 40 CFR 61.342? *is* Yes
Is this waste stream subject to treatment and control requirements of 40 CFR Part 61, Subpart FF?	*To be completed when* Are you a TSDF? *is* No

Facility Remediation & Clean Up

Facility remediation subject to 40 CFR 63 GGGGG?	No
Does the material contain less than (<) 500 ppmw VOHAPS at the point of determination?	*To be completed when* Facility remediation subject to 40 CFR 63 GGGGG? *is* Yes
CERCLA or State-Mandated clean-up?	No

To be completed when CERCLA or State-Mandated clean-up? is Yes

Please submit the Record of Decision or other documentation to assist others in the evaluation for proper disposal.

Radioactive Waste

To be completed when Regulated, Licensed or NORM Radioactive Waste? *is* Yes

Identify Isotopes and pCi/g	

PCBs

To be completed when Contains PCBs? *is* Yes

Regulated by 40 CFR 761?	
Remediation under 40 CFR 761.61 (a)?	
PCB imported into the US?	

Asbestos

To be completed when Contains Asbestos? *is* Yes

Asbestos Type	○ Friable ○ Non-Friable ○ Non-Friable Regulated

Shipping Information

Event Frequency	One Time
Anticipated Number of Loads	1
Estimated Annual Quantity	80
Unit of Measure	○ Tons ◉ Yards ○ Drums ○ Gallons ○ Pounds ○ Other
Other	*To be completed when* Unit of Measure *is* Other
Shipping Frequency	◉ Once ○ Daily ○ Weekly ○ Monthly ○ Other
Other	*To be completed when* Shipping Frequency *is* Other
Quantity Per Shipment	80
Container Type	CM
Container Size	40CY

Certification

I hereby certify that (1) all information submitted on this form and on supplemental materials is complete and accurate to the best of my knowledge and ability to determine; (2) the information provided herein, including any supplemental information, such as laboratory analytical, MSDS, etc., accurately describes the waste stream to be delivered to the facility and that all known or suspected hazards have been disclosed. I understand that, once the waste stream is approved by Destination Facility based on this information, any deviation in the source, composition, constituents or characteristics of the waste stream from the information described herein, may render the waste stream unacceptable for disposal, at the sole discretion of Destination Facility. I further understand that any deviation from the information contained herein will require immediate notification to the Destination Facility and cessation of disposal.

Signature _____

Date _____

Please print or type. Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: CAC003145852 ~~CAC003157830~~
2. Page 1 of 1
3. Emergency Response Phone: 800-535-5053
4. Manifest Tracking Number: 016576599 FLE

GENERATOR

5. Generator's Name and Mailing Address
SA RECYCLING, LLC
901 NEW DOCK ST
SAN PEDRO, CA 90731
Generator's Phone: 714-631-2031

Generator's Site Address (if different than mailing address)
701 NEW DOCK ST.
SAN PEDRO, CA 90731

6. Transporter 1 Company Name: E.C.T.I.
U.S. EPA ID Number: CAR000049064

7. Transporter 2 Company Name
U.S. EPA ID Number

8. Designated Facility Name and Site Address
US Ecology
Hwy 95 -11 Miles South of Beatty
Beatty, NV 89003
Facility's Phone: 800-239-3943
U.S. EPA ID Number: NVT330010000

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
	1. NON-RCRA HAZARDOUS WASTE, SOLID(SOIL WITH SEDIMENT)	15	DM	2,250	P	611
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information
WEAR PROPER PPE WHEN HANDLING
PROFILE:9B1.070128300-16364
INFOTRAC ACCOUNT#84412

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Jesus Anaya
Signature
Month 3 Day 2 Year 22

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter.signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: David Cruzado Jr
Signature
Month 3 Day 2 Year 22
Transporter 2 Printed/Typed Name
Signature
Month Day Year

DESIGNATED FACILITY

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:
18c. Signature of Alternate Facility (or Generator)
Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name
Signature
Month Day Year

EPA Form 8700-22 (Rev. 12-17) Previous editions are obsolete.

DESIGNATED FACILITY TO EPA's e-MANIFEST SYSTEM

ECTI
ENVIRONMENTAL CONTRACTORS TRANSPORTATION, INC.

P.O. Box 7318
San Bernardino, CA 92411
Phone (909) 884-7424
Fax (909) 884-3744

NON-HAZARDOUS WASTE MANIFEST

1. Generator US EPA ID No.: CAC003157830
2. Page 1 of 1
3. Emergency Response Phone No.: 800-535-5053
4. Manifest No.: 117128

5. Generator's Name and Mailing Address
SA RECYCLING, LLC
901 NEW DOCK ST
SAN PEDRO, CA 90731
Generator's Phone No.: 714-631-2031

Generator's Site Address (if different than mailing address in item 5)
701 NEW DOCK ST.
SAN PEDRO, CA 90731

6. Transporter No. 1 Company Name: E.C.T.I.
U.S. EPA ID No.: CAR000049064

7. Transporter No. 2 Company Name
U.S. EPA ID No.:

8. Designated Facility Name and Site Address
US Ecology
Hwy 95 -11 Miles South of Beatty
Beatty, NV 89003
Facility's Phone No.: 800-239-3943
U.S. EPA ID No.: NVT330010000

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	
a.	NON-HAZARDOUS WASTE,LIQUID(RAINWATER W/SEDIMENT)	2	Dm	110	G	
b.						
c.						
d.						

13. Special Handling Instructions and Additional Information
WEAR PROPER PPE WHEN HANDLING
PROFILE:9B1.070137747-17576
INFOTRAC ACCOUNT#84412
2X55gallon Drum's

14. GENERATOR'S/OFFEROR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Generator's/Offeror's Typed/Printed Name: Jesus Anaya
Signature:
Month 3 Day 7 Year 22

TRANSPORTER

15. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Typed/Printed Name: BRADLEY Hoffman
Signature:
Month 3 Day 7 Year 22
Transporter 2 Typed/Printed Name:
Signature:
Month Day Year

DESIGNATED FACILITY

16. Discrepancy
16a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference No:
16b. Alternate Facility (or Generator)
U.S. EPA ID No.
Facility's Phone No.:
16c. Signature of Alternate Facility (or Generator)
Month Day Year

17. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in item 16a
Typed/Printed Name
Signature
Month Day Year

ORIGINAL-RETURN TO GENERATOR

Please print or type.

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: CAR000334904
2. Page 1 of: 1
3. Emergency Response Phone: 800-535-5053
4. Manifest Tracking Number: 016576612 FLE

5. Generator's Name and Mailing Address
SA RECYCLING, LLC
2411 N. GLASSELL ST
ORANGE, CA 92865
Generator's Phone: 714-631-2031

Generator's Site Address (if different than mailing address)
901 NEW DOCK ST.
SAN PEDRO, CA 90731

6. Transporter 1 Company Name: E.C.T.I.
U.S. EPA ID Number: CAR000049064

7. Transporter 2 Company Name:
U.S. EPA ID Number:

8. Designated Facility Name and Site Address
US Ecology
Hwy 95 -11 Miles South of Beatty
Beatty, NV 89003
Facility's Phone: 800-239-3943
U.S. EPA ID Number: NVT330010000

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
	1. NON-RCRA HAZARDOUS WASTE, SOLID(SOIL WITH METAL)	17	DM	5,200	P	611
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information
WEAR PROPER PPE WHEN HANDLING
PROFILE:9B1.070128300-16364
INFOTRAC ACCOUNT#84412
17X55gallon Drum's

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Jesus Anaya
Signature:
Month Day Year: 3 7 22

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: BRADley Huffman
Signature:
Month Day Year: 3 7 22
Transporter 2 Printed/Typed Name:
Signature:
Month Day Year:

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:

18b. Alternate Facility (or Generator)
U.S. EPA ID Number:
Facility's Phone:

18c. Signature of Alternate Facility (or Generator)
Month Day Year:

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name:
Signature:
Month Day Year:

GENERATOR — INT'L — TRANSPORTER — DESIGNATED FACILITY

EPA Form 8700-22 (Rev. 12-17) Previous editions are obsolete.

DESIGNATED FACILITY TO EPA's e-MANIFEST SYSTEM

Please print or type.

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: CAC003157830
2. Page 1 of 1
3. Emergency Response Phone: 800-535-5053
4. Manifest Tracking Number: 016576610 FLE

5. Generator's Name and Mailing Address
SA RECYCLING, LLC
901 NEW DOCK ST
SAN PEDRO, CA 90731
Generator's Phone: 714-631-2031

Generator's Site Address (if different than mailing address)
701 NEW DOCK ST.
SAN PEDRO, CA 90731

6. Transporter 1 Company Name: E.C.T.I.
U.S. EPA ID Number: CAR000049064

7. Transporter 2 Company Name
U.S. EPA ID Number

8. Designated Facility Name and Site Address
US Ecology
Hwy 95 -11 Miles South of Beatty
Beatty, NV 89003
Facility's Phone: 800-239-3943
U.S. EPA ID Number: NVT330010000

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
	1. NON-RCRA HAZARDOUS WASTE, SOLID(SOIL WITH SEDIMENT)	18	DM	5,400	P	611
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information
WEAR PROPER PPE WHEN HANDLING
PROFILE:9B1.070128300-16364
INFOTRAC ACCOUNT#84412
18x55gallon Drum's

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Jesus Amaya
Signature:
Month Day Year: 3 7 22

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: BRADLEY Huffman
Signature:
Month Day Year: 3 7 22

Transporter 2 Printed/Typed Name
Signature
Month Day Year

DESIGNATED FACILITY

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator)
Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name
Signature
Month Day Year

EPA Form 8700-22 (Rev. 12-17) Previous editions are obsolete.

DESIGNATED FACILITY TO EPA's e-MANIFEST SYSTEM

ECTI
ENVIRONMENTAL CONTRACTORS TRANSPORTATION, INC.

P.O. Box 7318
San Bernardino, CA 92411
Phone (909) 884-7424
Fax (909) 884-3744

NON-HAZARDOUS WASTE MANIFEST

1. Generator US EPA ID No.: CAC003157830
2. Page 1 of 1
3. Emergency Response Phone No.: 800-535-5053
4. Manifest No.: 117128

5. Generator's Name and Mailing Address
SA RECYCLING, LLC
901 NEW DOCK ST
SAN PEDRO, CA 90731
Generator's Phone No.: 714-631-2031

Generator's Site Address (if different than mailing address in item 5)
701 NEW DOCK ST.
SAN PEDRO, CA 90731

6. Transporter No. 1 Company Name: E.C.T.I.
U.S. EPA ID No.: CAR000049064

7. Transporter No. 2 Company Name
U.S. EPA ID No.:

8. Designated Facility Name and Site Address
US Ecology
Hwy 95 -11 Miles South of Beatty
Beatty, NV 89003
Facility's Phone No.: 800-239-3943
U.S. EPA ID No.: NVT330010000

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	
a.	NON-HAZARDOUS WASTE,LIQUID(RAINWATER W/SEDIMENT)	2	Dm	110	G	
b.						
c.						
d.						

13. Special Handling Instructions and Additional Information
WEAR PROPER PPE WHEN HANDLING
PROFILE:9B1.070137747-17576
INFOTRAC ACCOUNT#84412
2X55gallon Drum's

14. GENERATOR'S/OFFEROR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Generator's/Offeror's Typed/Printed Name: Jesus Anaya
Signature:
Month 3 Day 7 Year 22

TRANSPORTER

15. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Typed/Printed Name: BRADLEY Hoffman
Signature:
Month 3 Day 7 Year 22
Transporter 2 Typed/Printed Name:
Signature:
Month Day Year

DESIGNATED FACILITY

16. Discrepancy
16a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference No:
16b. Alternate Facility (or Generator)
U.S. EPA ID No.
Facility's Phone No.:
16c. Signature of Alternate Facility (or Generator)
Month Day Year

17. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in item 16a
Typed/Printed Name
Signature
Month Day Year

ORIGINAL-RETURN TO GENERATOR

Please print or type.

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: CAR000334904
2. Page 1 of: 1
3. Emergency Response Phone: 800-535-5053
4. Manifest Tracking Number: 016576612 FLE

5. Generator's Name and Mailing Address
SA RECYCLING, LLC
2411 N. GLASSELL ST
ORANGE, CA 92865
Generator's Phone: 714-631-2031

Generator's Site Address (if different than mailing address)
901 NEW DOCK ST.
SAN PEDRO, CA 90731

6. Transporter 1 Company Name: E.C.T.I.
U.S. EPA ID Number: CAR000049064

7. Transporter 2 Company Name:
U.S. EPA ID Number:

8. Designated Facility Name and Site Address
US Ecology
Hwy 95 -11 Miles South of Beatty
Beatty, NV 89003
Facility's Phone: 800-239-3943
U.S. EPA ID Number: NVT330010000

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
	1. NON-RCRA HAZARDOUS WASTE, SOLID(SOIL WITH METAL)	17	DM	5,200	P	611
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information
WEAR PROPER PPE WHEN HANDLING
PROFILE:9B1.070128300-16364
INFOTRAC ACCOUNT#84412
17X55gallon Drum's

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Jesus Anaya
Signature:
Month Day Year: 3 7 22

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: BRADley Huffman
Signature:
Month Day Year: 3 7 22
Transporter 2 Printed/Typed Name:
Signature:
Month Day Year:

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:

18b. Alternate Facility (or Generator)
U.S. EPA ID Number:
Facility's Phone:

18c. Signature of Alternate Facility (or Generator)
Month Day Year:

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name:
Signature:
Month Day Year:

GENERATOR — INT'L — TRANSPORTER — DESIGNATED FACILITY

EPA Form 8700-22 (Rev. 12-17) Previous editions are obsolete.

DESIGNATED FACILITY TO EPA's e-MANIFEST SYSTEM

Please print or type.

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: CAC003157830
2. Page 1 of 1
3. Emergency Response Phone: 800-535-5053
4. Manifest Tracking Number: 016576610 FLE

5. Generator's Name and Mailing Address
SA RECYCLING, LLC
901 NEW DOCK ST
SAN PEDRO, CA 90731
Generator's Phone: 714-631-2031

Generator's Site Address (if different than mailing address)
701 NEW DOCK ST.
SAN PEDRO, CA 90731

6. Transporter 1 Company Name: E.C.T.I.
U.S. EPA ID Number: CAR000049064

7. Transporter 2 Company Name
U.S. EPA ID Number

8. Designated Facility Name and Site Address
US Ecology
Hwy 95 -11 Miles South of Beatty
Beatty, NV 89003
Facility's Phone: 800-239-3943
U.S. EPA ID Number: NVT330010000

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
	1. NON-RCRA HAZARDOUS WASTE, SOLID(SOIL WITH SEDIMENT)	18	DM	5,400	P	611
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information
WEAR PROPER PPE WHEN HANDLING
PROFILE:9B1.070128300-16364
INFOTRAC ACCOUNT#84412
18x55gallon Drum's

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Jesus Amaya
Signature:
Month Day Year: 3 7 22

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: BRADLEY Huffman
Signature:
Month Day Year: 3 7 22

Transporter 2 Printed/Typed Name
Signature
Month Day Year

DESIGNATED FACILITY

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator)
Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name
Signature
Month Day Year

EPA Form 8700-22 (Rev. 12-17) Previous editions are obsolete.

DESIGNATED FACILITY TO EPA's e-MANIFEST SYSTEM

ECTI
ENVIRONMENTAL CONTRACTORS TRANSPORTATION, INC.

P.O. Box 7318
San Bernardino, CA 92411
Phone (909) 884-7424
Fax (909) 884-3744

NON-HAZARDOUS WASTE MANIFEST

1. Generator US EPA ID No.: CAC003157833
2. Page 1 of 1
3. Emergency Response Phone No.: 800-535-5053
4. Manifest No.: 128621

5. Generator's Name and Mailing Address
SA RECYCLING, LLC
901 NEW DOCK ST
SAN PEDRO, CA 90731
Generator's Phone No: 714-631-2031

Generator's Site Address (if different than mailing address in item 5)
1001 NEW DOCK ST.
SAN PEDRO, CA 90731

6. Transporter No. 1 Company Name: E.C.T.I.
U.S. EPA ID No.: CAR000049064

7. Transporter No. 2 Company Name:
U.S. EPA ID No.:

8. Designated Facility Name and Site Address
US Ecology
Hwy 95 -11 Miles South of Beatty
Beatty, NV 89003
Facility's Phone No: 800-239-3943
U.S. EPA ID No.: NVT330010000

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	
a.	NON-HAZARDOUS WASTE,LIQUID(RAINWATER W/SEDIMENT)	4	Dm	195	G	
b.						
c.						
d.						

13. Special Handling Instructions and Additional Information
WEAR PROPER PPE WHEN HANDLING
PROFILE:9B1.070137747-17576
INFOTRAC ACCOUNT#84412
4X55Gallon Drum's

14. GENERATOR'S/OFFEROR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Generator's/Offeror's Typed/Printed Name: Roy Hernandez
Signature: Roy Hernandez
Month 4 Day 11 Year 22

15. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Typed/Printed Name: BRADLEY Hartman
Signature:
Month 4 Day 11 Year 22
Transporter 2 Typed/Printed Name:
Signature:
Month Day Year

16. Discrepancy
16a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference No:
16b. Alternate Facility (or Generator)
U.S. EPA ID No.
Facility's Phone No.:
16c. Signature of Alternate Facility (or Generator)
Month Day Year

17. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in item 16a
Typed/Printed Name
Signature
Month Day Year

GENERATOR
TRANSPORTER
DESIGNATED FACILITY

Please print or type.

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: CAC003157833
2. Page 1 of 1
3. Emergency Response Phone: 800-535-5053
4. Manifest Tracking Number: 016576164 FLE

5. Generator's Name and Mailing Address
SA RECYCLING
901 NEW DOCK ST
SAN PEDRO, CA 90731

Generator's Site Address (if different than mailing address)
1001 NEW DOCK ST.
SAN PEDRO, CA 90731

Generator's Phone: 714-631-2031

6. Transporter 1 Company Name: E.C.T.I.
U.S. EPA ID Number: CAR000049064

7. Transporter 2 Company Name:
U.S. EPA ID Number:

8. Designated Facility Name and Site Address
US Ecology
Hwy 95 -11 Miles South of Beatty
Beatty, NV 89003
U.S. EPA ID Number: NVT330010000

Facility's Phone: 800-239-3943

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
	1. NON-RCRA HAZARDOUS WASTE, SOLID(SOIL WITH METAL)	25	DM	9,000	P	611
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information
WEAR PROPER PPE WHEN HANDLING
PROFILE:9B1.070128300-16364
INFOTRAC ACCOUNT#84412
25 X 55 Gallon Drums

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

GENERATOR

Generator's/Offeror's Printed/Typed Name: Roy Hernandez
Signature: Roy Hernandez
Month 4 Day 11 Year 22

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: BRADLEY Huffman
Signature:
Month 4 Day 11 Year 22
Transporter 2 Printed/Typed Name:
Signature:
Month Day Year

DESIGNATED FACILITY

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:
18c. Signature of Alternate Facility (or Generator)
Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name
Signature
Month Day Year

Please print or type.

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
CAC003157830	1	800-535-5053	016576163 FLE

5. Generator's Name and Mailing Address
SA RECYCLING
901 NEW DOCK ST
SAN PEDRO, CA 90731

Generator's Site Address (if different than mailing address)
701 NEW DOCK ST.
SAN PEDRO, CA 90731

Generator's Phone: 714-631-2031

6. Transporter 1 Company Name: E.C.T.I. — U.S. EPA ID Number: CAR000049064

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address
US Ecology
Hwy 95 -11 Miles South of Beatty
Beatty, NV 89003

U.S. EPA ID Number: NVT330010000

Facility's Phone: 800-239-3943

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
	1. NON-RCRA HAZARDOUS WASTE, SOLID(SOIL WITH METAL)	11	DM	4,400	P	611
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information
WEAR PROPER PPE WHEN HANDLING
PROFILE:9B1.070128300-16364
INFOTRAC ACCOUNT#84412
11X55gallon Drums

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Roy Hernandez — Signature: Roy Hernandez — Month 4 Day 11 Year 22

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Bradley Hoffman — Signature: [signature] — Month 4 Day 11 Year 22
Transporter 2 Printed/Typed Name — Signature — Month Day Year

DESIGNATED FACILITY

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:
18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name — Signature — Month Day Year

Please print or type.

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: CAR000334904
2. Page 1 of 1
3. Emergency Response Phone: 800-535-5053
4. Manifest Tracking Number: 016576162 FLE

GENERATOR

5. Generator's Name and Mailing Address: SA RECYCLING, LLC, 2411 N. GLASSELL ST, ORANGE, CA 92865

Generator's Site Address (if different than mailing address): 901 NEW DOCK ST., SAN PEDRO, CA 90731

Generator's Phone: 714-631-2031

6. Transporter 1 Company Name: E.C.T.I.
U.S. EPA ID Number: CAR000049064

7. Transporter 2 Company Name:
U.S. EPA ID Number:

8. Designated Facility Name and Site Address: US Ecology, Hwy 95 -11 Miles South of Beatty, Beatty, NV 89003
U.S. EPA ID Number: NVT330010000

Facility's Phone: 800-239-3943

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
	1. NON-RCRA HAZARDOUS WASTE, SOLID(SOIL WITH METAL)	1	DM	400	P	611
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information
WEAR PROPER PPE WHEN HANDLING
PROFILE:9B1.070128300-16364
INFOTRAC ACCOUNT#84412
1X55gallon Drum

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Roy Hernandez
Signature: Roy Hernandez
Month 4 Day 11 Year 22

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: BRADLY Huffman
Signature:
Month 4 Day 11 Year 22

Transporter 2 Printed/Typed Name:
Signature:
Month Day Year

DESIGNATED FACILITY

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator)
U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator)
Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1. 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name
Signature
Month Day Year

DESIGNATED FACILITY TO EPA's - MANIFEST

Form Approved. OMB No. 2050-0039

Please print or type.

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: CAC003157830
2. Page 1 of
3. Emergency Response Phone: 800-535-5053
4. Manifest Tracking Number: 016576178 FLE

5. Generator's Name and Mailing Address: SA RECYCLING, LLC, 901 NEW DOCK ST, SAN PEDRO, CA 90731

Generator's Site Address (if different than mailing address): 701 NEW DOCK ST, SAN PEDRO, CA 90731

Generator's Phone: 714-631-2031

6. Transporter 1 Company Name: E.C.T.I. PO BOX 7318 San Bernardino, CA 92411 (800)664-7773 — U.S. EPA ID Number: CAR000049064

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address: SOUTH YUMA COUNTY LANDFILL, 19536 SOUTH AVENUE 1E, YUMA, AZ 85366 — U.S. EPA ID Number: AZR000506980

Facility's Phone: 928-341-9300

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
	1. NON RCRA HAZARDOUS WASTE SOLID(GREENWASTE WITH LEAD)	6	BA	18	Y	181
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information: WEAR PROPER PPE WHEN HANDLING PROFILE:C3747 — INFOTRAC ACCOUNT#84412

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Roy Hernandez — Signature: Roy Hernandez — Month 4 Day 13 Year 22

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Allen Hamlin — Signature: — Month 4 Day 13 Year 22

Transporter 2 Printed/Typed Name — Signature — Month Day Year

DESIGNATED FACILITY

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1. 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name — Signature — Month Day Year

EPA Form 8700-22 (Rev. 12-17) Previous editions are obsolete.

DESIGNATED FACILITY TO EPA's e-MANIFEST SYSTEM

Please print or type.

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
CAC003157833	1	800-535-5053	016576231 FLE

5. Generator's Name and Mailing Address
SA RECYCLING
901 NEW DOCK ST
SAN PEDRO, CA 90731
Generator's Phone: 714-631-2031

Generator's Site Address (if different than mailing address)
1001 NEW DOCK ST.
SAN PEDRO, CA 90731

6. Transporter 1 Company Name: E.C.T.I.
U.S. EPA ID Number: CAR000049064

7. Transporter 2 Company Name
U.S. EPA ID Number

8. Designated Facility Name and Site Address
US Ecology
Hwy 95 -11 Miles South of Beatty
Beatty, NV 89003
Facility's Phone: 800-239-3943
U.S. EPA ID Number: NVT330010000

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
	1. NON-RCRA HAZARDOUS WASTE, SOLID (SOIL WITH METAL)	25	DM	8750	P	611
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information
WEAR PROPER PPE WHEN HANDLING
PROFILE:9B1.070128300-16364
INFOTRAC ACCOUNT#84412

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: x Jesus Anaya
Signature: x
Month 4 Day 19 Year 22

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: x Andrew Lopez
Signature: x
Month 4 Day 19 Year 22
Transporter 2 Printed/Typed Name
Signature
Month Day Year

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:

18b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator)
Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name
Signature
Month Day Year

GENERATOR | INT'L | TRANSPORTER | DESIGNATED FACILITY

Please print or type. Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: CAC003157833
2. Page 1 of 1
3. Emergency Response Phone: 800-535-5053
4. Manifest Tracking Number: 016576242 FLE

GENERATOR

5. Generator's Name and Mailing Address: SA RECYCLING, LLC
901 NEW DOCK ST
SAN PEDRO, CA 90731
Generator's Phone: 714-631-2031

Generator's Site Address (if different than mailing address): 1001NEW DOCK ST.
SAN PEDRO, CA 90731

6. Transporter 1 Company Name: E.C.T.I.
U.S. EPA ID Number: CAR000049064

7. Transporter 2 Company Name:
U.S. EPA ID Number:

8. Designated Facility Name and Site Address: SOUTH YUMA COUNTY LANDFILL
19536 SOUTH AVENUE 1E
YUMA, AZ 85366
Facility's Phone: 928-341-9300
U.S. EPA ID Number: AZR000506980

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
	1. NON-RCRA HAZARDOUS WASTE, SOLID(GREEN WASTE WITH LEAD DUST)	8	DM	1,200	P	181
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information
WEAR PROPER PPE WHILE HANDLING
PROFILE: C_____

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Jesus Anaya
Signature:
Month 4 Day 22 Year 22

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: David Orozcodor
Signature:
Month 4 Day 22 Year 22
Transporter 2 Printed/Typed Name:
Signature:
Month Day Year

DESIGNATED FACILITY

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:

18b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator)
Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name
Signature
Month Day Year

Please print or type. Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: CAC003157830
2. Page 1 of 1
3. Emergency Response Phone: 800-535-5053
4. Manifest Tracking Number: 016576244 FLE

5. Generator's Name and Mailing Address
SA RECYCLING, LLC
901 NEW DOCK ST
SAN PEDRO, CA 90731
Generator's Phone: 714-631-2031

Generator's Site Address (if different than mailing address)
701 NEW DOCK ST.
SAN PEDRO, CA 90731

6. Transporter 1 Company Name: E.C.T.I.
U.S. EPA ID Number: CAR000049064

7. Transporter 2 Company Name
U.S. EPA ID Number

8. Designated Facility Name and Site Address
US Ecology
Hwy 95 -11 Miles South of Beatty
Beatty, NV 89003
Facility's Phone: 800-239-3943
U.S. EPA ID Number: NVT330010000

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
	1. R.Q.NA2212,ASBESTOS,9,PGIII	1	DM	50	P	151
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information
WEAR PROPER PPE WHEN HANDLING
PROFILE:9B1.070127390-4049
INFOTRAC ACCOUNT#84412

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable International and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Jesus Anaya
Signature
Month 9 Day 22 Year 22

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: David Orozado Jr
Signature
Month 4 Day 22 Year 22

Transporter 2 Printed/Typed Name
Signature
Month Day Year

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:

18b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator)
Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name
Signature
Month Day Year

GENERATOR — INT'L — TRANSPORTER — DESIGNATED FACILITY

Please print or type. Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
CAC003157830	1	800-535-5053	016576243 FLE

5. Generator's Name and Mailing Address
SA RECYCLING, LLC
901 NEW DOCK ST
SAN PEDRO, CA 90731
Generator's Phone: 714-631-2031

Generator's Site Address (if different than mailing address)
701 NEW DOCK ST.
SAN PEDRO, CA 90731

6. Transporter 1 Company Name: E.C.T.I. — U.S. EPA ID Number: CAR000049064

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address
US Ecology
Hwy 95 -11 Miles South of Beatty
Beatty, NV 89003
Facility's Phone: 800-239-3943
U.S. EPA ID Number: NVT330010000

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
	1. NON-RCRA HAZARDOUS WASTE, SOLID(SOIL WITH SEDIMENT)	3	DM	750	P	611
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information
WEAR PROPER PPE WHEN HANDLING
PROFILE:9B1.070128300-16364
INFOTRAC ACCOUNT#84412

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Jesus Alvarez — Signature: [signature] — Month 4 Day 22 Year 22

GENERATOR

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: David Orozadoy — Signature: [signature] — Month 4 Day 22 Year 22
Transporter 2 Printed/Typed Name — Signature — Month Day Year

DESIGNATED FACILITY

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:
18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name — Signature — Month Day Year

Please print or type. Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: CAC003157833
2. Page 1 of 1
3. Emergency Response Phone: 800-535-5053
4. Manifest Tracking Number: 016576235 FLE

GENERATOR

5. Generator's Name and Mailing Address
SA RECYCLING, LLC
901 NEW DOCK ST
SAN PEDRO, CA 90731
Generator's Phone: 714-631-2031

Generator's Site Address (if different than mailing address)
1001NEW DOCK ST.
SAN PEDRO, CA 90731

6. Transporter 1 Company Name: E.C.T.I.
U.S. EPA ID Number: CAR000049064

7. Transporter 2 Company Name:
U.S. EPA ID Number:

8. Designated Facility Name and Site Address
US Ecology
Hwy 95 -11 Miles South of Beatty
Beatty, NV 89003
Facility's Phone: 800-239-3943
U.S. EPA ID Number: NVT330010000

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
	1. NON-HAZARDOUS WASTE,LIQUID(RAINWATER W/SEDIMENT)	1	DM	25	G	
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information
WEAR PROPER PPE WHEN HANDLING
PROFILE:9B1.070137747-17576
INFOTRAC ACCOUNT#84412

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Jesus Arayza
Signature:
Month 4 Day 22 Year 22

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: David Orozdoo
Signature:
Month 4 Day 22 Year 22

Transporter 2 Printed/Typed Name:
Signature:
Month Day Year

DESIGNATED FACILITY

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:

18b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator)
Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name
Signature
Month Day Year

Off-Site LFM Interim Cleanup and Sampling Results Memorandum
901 New Dock Street
Terminal Island, California 90731

ATTACHMENT E

Laboratory Reports

ADVANCED TECHNOLOGY LABORATORIES

October 07, 2021

Vinnie Robino
GSI Environmental, Inc.
19200 Von Karman Ave., Suite 800
Irvine, CA 92612
Tel: (949) 242-8284
Fax:

ELAP No.: 1838
CSDLAC No.: 10196
ORELAP No.: CA300003

Re: ATL Work Order Number : 2102089
Client Reference : SA Santa Ana

Enclosed are the results for sample(s) received on October 06, 2021 by Advanced Technology Laboratories. The sample(s) are tested for the parameters as indicated on the enclosed chain of custody in accordance with applicable laboratory certifications. The laboratory results contained in this report specifically pertains to the sample(s) submitted.

Thank you for the opportunity to serve the needs of your company. If you have any questions, please feel free to contact me or your Project Manager.

Sincerely,

for

Amy Leung
Laboratory Director

The cover letter and the case narrative are an integral part of this analytical report and its absence renders the report invalid. Test results contained within this data package meet the requirements of applicable state-specific certification programs. The report cannot be reproduced without written permission from the client and Advanced Technology Laboratories.

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SA Santa Ana
19200 Von Karman Ave., Suite 800		Report To :	Vinnie Robino
Irvine , CA 92612		Reported :	10/07/2021

SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
PTO1	2102089-01	Soil	10/06/21 11:05	10/06/21 13:52
PTO1A	2102089-02	Soil	10/06/21 11:15	10/06/21 13:52
PTO4	2102089-03	Soil	10/06/21 11:18	10/06/21 13:52
PTO4A	2102089-04	Soil	10/06/21 11:20	10/06/21 13:52
PTO2	2102089-05	Soil	10/06/21 11:28	10/06/21 13:52
PTO3	2102089-06	Soil	10/06/21 11:35	10/06/21 13:52
PTO5	2102089-07	Soil	10/06/21 11:42	10/06/21 13:52
PTO5A	2102089-08	Soil	10/06/21 11:45	10/06/21 13:52
PTO6	2102089-09	Soil	10/06/21 11:50	10/06/21 13:52
PTO7	2102089-10	Soil	10/06/21 11:56	10/06/21 13:52
PTO8A	2102089-11	Soil	10/06/21 12:06	10/06/21 13:52
PTO8B	2102089-12	Soil	10/06/21 12:11	10/06/21 13:52
PTO8C	2102089-13	Soil	10/06/21 12:20	10/06/21 13:52
PTO8	2102089-14	Soil	10/06/21 12:23	10/06/21 13:52
Temp Blank	2102089-15	Water	10/06/21 10:00	10/06/21 13:52

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SA Santa Ana
19200 Von Karman Ave., Suite 800		Report To :	Vinnie Robino
Irvine , CA 92612		Reported :	10/07/2021

DETECTION SUMMARY

Client Sample ID PTO1

Lab ID: 2102089-01

Total Metals by ICP-AES EPA 6010B **Analyst: EN**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Cadmium	**3.8**	1.0	1	B1J0096	10/06/2021	10/07/21 11:58	
Lead	**230**	1.0	1	B1J0096	10/06/2021	10/07/21 11:58	
Zinc	**3200**	10	10	B1J0096	10/06/2021	10/07/21 15:55	

Client Sample ID PTO1A

Lab ID: 2102089-02

Total Metals by ICP-AES EPA 6010B **Analyst: EN**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Cadmium	**3.4**	1.0	1	B1J0096	10/06/2021	10/07/21 11:52	
Lead	**220**	1.0	1	B1J0096	10/06/2021	10/07/21 11:52	
Zinc	**2800**	10	10	B1J0096	10/06/2021	10/07/21 13:15	

Client Sample ID PTO4

Lab ID: 2102089-03

Total Metals by ICP-AES EPA 6010B **Analyst: EN**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Cadmium	**13**	1.0	1	B1J0096	10/06/2021	10/07/21 12:00	
Lead	**770**	1.0	1	B1J0096	10/06/2021	10/07/21 12:00	
Zinc	**8000**	10	10	B1J0096	10/06/2021	10/07/21 13:19	

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SA Santa Ana
19200 Von Karman Ave., Suite 800		Report To :	Vinnie Robino
Irvine , CA 92612		Reported :	10/07/2021

DETECTION SUMMARY

Client Sample ID PTO4A

Lab ID: 2102089-04

Total Metals by ICP-AES EPA 6010B **Analyst: EN**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Cadmium	**7.5**	1.0	1	B1J0096	10/06/2021	10/07/21 12:01	
Lead	**500**	1.0	1	B1J0096	10/06/2021	10/07/21 12:01	
Zinc	**4100**	10	10	B1J0096	10/06/2021	10/07/21 13:21	

Client Sample ID PTO2

Lab ID: 2102089-05

Total Metals by ICP-AES EPA 6010B **Analyst: EN**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Cadmium	**19**	1.0	1	B1J0096	10/06/2021	10/07/21 12:10	
Lead	**1100**	1.0	1	B1J0096	10/06/2021	10/07/21 12:10	
Zinc	**5700**	10	10	B1J0096	10/06/2021	10/07/21 13:23	

Client Sample ID PTO3

Lab ID: 2102089-06

Total Metals by ICP-AES EPA 6010B **Analyst: EN**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Cadmium	**29**	1.0	1	B1J0096	10/06/2021	10/07/21 12:12	
Lead	**1400**	1.0	1	B1J0096	10/06/2021	10/07/21 12:12	
Zinc	**9700**	10	10	B1J0096	10/06/2021	10/07/21 13:24	

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SA Santa Ana
19200 Von Karman Ave., Suite 800		Report To :	Vinnie Robino
Irvine , CA 92612		Reported :	10/07/2021

DETECTION SUMMARY

Client Sample ID PTO5

Lab ID: 2102089-07

Total Metals by ICP-AES EPA 6010B **Analyst: EN**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Cadmium	**26**	1.0	1	B1J0096	10/06/2021	10/07/21 12:14	
Lead	**1300**	1.0	1	B1J0096	10/06/2021	10/07/21 12:14	
Zinc	**8700**	10	10	B1J0096	10/06/2021	10/07/21 13:26	

Client Sample ID PTO5A

Lab ID: 2102089-08

Total Metals by ICP-AES EPA 6010B **Analyst: EN**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Cadmium	**13**	1.0	1	B1J0096	10/06/2021	10/07/21 12:15	
Lead	**740**	1.0	1	B1J0096	10/06/2021	10/07/21 12:15	
Zinc	**5300**	10	10	B1J0096	10/06/2021	10/07/21 13:27	

Client Sample ID PTO6

Lab ID: 2102089-09

Total Metals by ICP-AES EPA 6010B **Analyst: EN**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Cadmium	**25**	1.0	1	B1J0096	10/06/2021	10/07/21 12:17	
Lead	**1200**	1.0	1	B1J0096	10/06/2021	10/07/21 12:17	
Zinc	**7900**	10	10	B1J0096	10/06/2021	10/07/21 13:29	

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SA Santa Ana
19200 Von Karman Ave., Suite 800		Report To :	Vinnie Robino
Irvine , CA 92612		Reported :	10/07/2021

DETECTION SUMMARY

Client Sample ID PTO7

Lab ID: 2102089-10

Total Metals by ICP-AES EPA 6010B **Analyst: EN**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Cadmium	**24**	1.0	1	B1J0096	10/06/2021	10/07/21 12:19	
Lead	**1200**	1.0	1	B1J0096	10/06/2021	10/07/21 12:19	
Zinc	**8700**	10	10	B1J0096	10/06/2021	10/07/21 13:34	

Client Sample ID PTO8A

Lab ID: 2102089-11

Total Metals by ICP-AES EPA 6010B **Analyst: EN**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Cadmium	**1.5**	1.0	1	B1J0096	10/06/2021	10/07/21 13:37	
Lead	**150**	1.0	1	B1J0096	10/06/2021	10/07/21 13:37	
Zinc	**1100**	1.0	1	B1J0096	10/06/2021	10/07/21 13:37	

Client Sample ID PTO8B

Lab ID: 2102089-12

Total Metals by ICP-AES EPA 6010B **Analyst: EN**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Cadmium	**2.2**	1.0	1	B1J0096	10/06/2021	10/07/21 13:39	
Lead	**210**	1.0	1	B1J0096	10/06/2021	10/07/21 13:39	
Zinc	**1300**	1.0	1	B1J0096	10/06/2021	10/07/21 13:39	

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SA Santa Ana
19200 Von Karman Ave., Suite 800		Report To :	Vinnie Robino
Irvine , CA 92612		Reported :	10/07/2021

DETECTION SUMMARY

Client Sample ID PTO8C

Lab ID: 2102089-13

Total Metals by ICP-AES EPA 6010B **Analyst: EN**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Cadmium	**1.2**	1.0	1	B1J0096	10/06/2021	10/07/21 13:41	
Lead	**170**	1.0	1	B1J0096	10/06/2021	10/07/21 13:41	
Zinc	**790**	1.0	1	B1J0096	10/06/2021	10/07/21 13:41	

Client Sample ID PTO8

Lab ID: 2102089-14

Total Metals by ICP-AES EPA 6010B **Analyst: EN**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Cadmium	**4.1**	1.0	1	B1J0096	10/06/2021	10/07/21 12:25	
Lead	**410**	1.0	1	B1J0096	10/06/2021	10/07/21 12:25	
Zinc	**2700**	10	10	B1J0096	10/06/2021	10/07/21 13:42	

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SA Santa Ana
19200 Von Karman Ave., Suite 800		Report To :	Vinnie Robino
Irvine , CA 92612		Reported :	10/07/2021

Client Sample ID: PTO1

Lab ID: 2102089-01

Total Metals by ICP-AES EPA 6010B **Analyst: EN**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Cadmium	**3.8**	1.0	1	B1J0096	10/06/2021	10/07/21 11:58	
Lead	**230**	1.0	1	B1J0096	10/06/2021	10/07/21 11:58	
Zinc	**3200**	10	10	B1J0096	10/06/2021	10/07/21 15:55	

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SA Santa Ana
19200 Von Karman Ave., Suite 800		Report To :	Vinnie Robino
Irvine , CA 92612		Reported :	10/07/2021

Client Sample ID: PTO1A

Lab ID: 2102089-02

Total Metals by ICP-AES EPA 6010B **Analyst: EN**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Cadmium	**3.4**	1.0	1	B1J0096	10/06/2021	10/07/21 11:52	
Lead	**220**	1.0	1	B1J0096	10/06/2021	10/07/21 11:52	
Zinc	**2800**	10	10	B1J0096	10/06/2021	10/07/21 13:15	

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SA Santa Ana
19200 Von Karman Ave., Suite 800		Report To :	Vinnie Robino
Irvine , CA 92612		Reported :	10/07/2021

Client Sample ID: PTO4

Lab ID: 2102089-03

Total Metals by ICP-AES EPA 6010B **Analyst: EN**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Cadmium	**13**	1.0	1	B1J0096	10/06/2021	10/07/21 12:00	
Lead	**770**	1.0	1	B1J0096	10/06/2021	10/07/21 12:00	
Zinc	**8000**	10	10	B1J0096	10/06/2021	10/07/21 13:19	

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SA Santa Ana
19200 Von Karman Ave., Suite 800		Report To :	Vinnie Robino
Irvine , CA 92612		Reported :	10/07/2021

Client Sample ID: PTO4A

Lab ID: 2102089-04

Total Metals by ICP-AES EPA 6010B **Analyst: EN**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Cadmium	**7.5**	1.0	1	B1J0096	10/06/2021	10/07/21 12:01	
Lead	**500**	1.0	1	B1J0096	10/06/2021	10/07/21 12:01	
Zinc	**4100**	10	10	B1J0096	10/06/2021	10/07/21 13:21	

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SA Santa Ana
19200 Von Karman Ave., Suite 800		Report To :	Vinnie Robino
Irvine , CA 92612		Reported :	10/07/2021

Client Sample ID: PTO2

Lab ID: 2102089-05

Total Metals by ICP-AES EPA 6010B **Analyst: EN**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Cadmium	**19**	1.0	1	B1J0096	10/06/2021	10/07/21 12:10	
Lead	**1100**	1.0	1	B1J0096	10/06/2021	10/07/21 12:10	
Zinc	**5700**	10	10	B1J0096	10/06/2021	10/07/21 13:23	

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SA Santa Ana
19200 Von Karman Ave., Suite 800		Report To :	Vinnie Robino
Irvine , CA 92612		Reported :	10/07/2021

Client Sample ID: PTO3

Lab ID: 2102089-06

Total Metals by ICP-AES EPA 6010B **Analyst: EN**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Cadmium	**29**	1.0	1	B1J0096	10/06/2021	10/07/21 12:12	
Lead	**1400**	1.0	1	B1J0096	10/06/2021	10/07/21 12:12	
Zinc	**9700**	10	10	B1J0096	10/06/2021	10/07/21 13:24	

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SA Santa Ana
19200 Von Karman Ave., Suite 800		Report To :	Vinnie Robino
Irvine , CA 92612		Reported :	10/07/2021

Client Sample ID: PTO5

Lab ID: 2102089-07

Total Metals by ICP-AES EPA 6010B **Analyst: EN**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Cadmium	**26**	1.0	1	B1J0096	10/06/2021	10/07/21 12:14	
Lead	**1300**	1.0	1	B1J0096	10/06/2021	10/07/21 12:14	
Zinc	**8700**	10	10	B1J0096	10/06/2021	10/07/21 13:26	

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SA Santa Ana
19200 Von Karman Ave., Suite 800		Report To :	Vinnie Robino
Irvine , CA 92612		Reported :	10/07/2021

Client Sample ID: PTO5A

Lab ID: 2102089-08

Total Metals by ICP-AES EPA 6010B **Analyst: EN**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Cadmium	**13**	1.0	1	B1J0096	10/06/2021	10/07/21 12:15	
Lead	**740**	1.0	1	B1J0096	10/06/2021	10/07/21 12:15	
Zinc	**5300**	10	10	B1J0096	10/06/2021	10/07/21 13:27	

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SA Santa Ana
19200 Von Karman Ave., Suite 800		Report To :	Vinnie Robino
Irvine , CA 92612		Reported :	10/07/2021

Client Sample ID: PTO6

Lab ID: 2102089-09

Total Metals by ICP-AES EPA 6010B **Analyst: EN**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Cadmium	**25**	1.0	1	B1J0096	10/06/2021	10/07/21 12:17	
Lead	**1200**	1.0	1	B1J0096	10/06/2021	10/07/21 12:17	
Zinc	**7900**	10	10	B1J0096	10/06/2021	10/07/21 13:29	

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SA Santa Ana
19200 Von Karman Ave., Suite 800		Report To :	Vinnie Robino
Irvine , CA 92612		Reported :	10/07/2021

Client Sample ID: PTO7

Lab ID: 2102089-10

Total Metals by ICP-AES EPA 6010B **Analyst: EN**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Cadmium	**24**	1.0	1	B1J0096	10/06/2021	10/07/21 12:19	
Lead	**1200**	1.0	1	B1J0096	10/06/2021	10/07/21 12:19	
Zinc	**8700**	10	10	B1J0096	10/06/2021	10/07/21 13:34	

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SA Santa Ana
19200 Von Karman Ave., Suite 800		Report To :	Vinnie Robino
Irvine , CA 92612		Reported :	10/07/2021

Client Sample ID: PTO8A

Lab ID: 2102089-11

Total Metals by ICP-AES EPA 6010B **Analyst: EN**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Cadmium	**1.5**	1.0	1	B1J0096	10/06/2021	10/07/21 13:37	
Lead	**150**	1.0	1	B1J0096	10/06/2021	10/07/21 13:37	
Zinc	**1100**	1.0	1	B1J0096	10/06/2021	10/07/21 13:37	

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SA Santa Ana
19200 Von Karman Ave., Suite 800		Report To :	Vinnie Robino
Irvine , CA 92612		Reported :	10/07/2021

Client Sample ID: PTO8B

Lab ID: 2102089-12

Total Metals by ICP-AES EPA 6010B **Analyst: EN**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Cadmium	**2.2**	1.0	1	B1J0096	10/06/2021	10/07/21 13:39	
Lead	**210**	1.0	1	B1J0096	10/06/2021	10/07/21 13:39	
Zinc	**1300**	1.0	1	B1J0096	10/06/2021	10/07/21 13:39	

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SA Santa Ana
19200 Von Karman Ave., Suite 800		Report To :	Vinnie Robino
Irvine , CA 92612		Reported :	10/07/2021

Client Sample ID: PTO8C

Lab ID: 2102089-13

Total Metals by ICP-AES EPA 6010B **Analyst: EN**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Cadmium	**1.2**	1.0	1	B1J0096	10/06/2021	10/07/21 13:41	
Lead	**170**	1.0	1	B1J0096	10/06/2021	10/07/21 13:41	
Zinc	**790**	1.0	1	B1J0096	10/06/2021	10/07/21 13:41	

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SA Santa Ana
19200 Von Karman Ave., Suite 800		Report To :	Vinnie Robino
Irvine , CA 92612		Reported :	10/07/2021

Client Sample ID: PTO8

Lab ID: 2102089-14

Total Metals by ICP-AES EPA 6010B **Analyst: EN**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Cadmium	**4.1**	1.0	1	B1J0096	10/06/2021	10/07/21 12:25	
Lead	**410**	1.0	1	B1J0096	10/06/2021	10/07/21 12:25	
Zinc	**2700**	10	10	B1J0096	10/06/2021	10/07/21 13:42	

Certificate of Analysis

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Irvine , CA 92612		Reported :	10/07/2021

Client Sample ID: Temp Blank

Lab ID: 2102089-15

Total Metals by ICP-AES EPA 6010B **Analyst: en**

Analyte	Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Cadmium	ND	0.0030	1	B1J0120	10/07/2021	10/07/21 16:52	
Lead	ND	0.0050	1	B1J0120	10/07/2021	10/07/21 16:52	
Zinc	ND	0.025	1	B1J0120	10/07/2021	10/07/21 16:52	

Certificate of Analysis

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Irvine , CA 92612		Reported :	10/07/2021

QUALITY CONTROL SECTION

Total Metals by ICP-AES EPA 6010B - Quality Control

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B1J0096 - EPA 3050B_S										
Blank (B1J0096-BLK1)					Prepared: 10/6/2021 Analyzed: 10/7/2021					
Cadmium	ND	1.0	0.14							
Lead	ND	1.0	0.18							
Zinc	ND	1.0	0.15							
LCS (B1J0096-BS1)					Prepared: 10/6/2021 Analyzed: 10/7/2021					
Cadmium	25.3083	1.0	0.14	25.0000		101	80 - 120			
Lead	25.4424	1.0	0.18	25.0000		102	80 - 120			
Zinc	25.6132	1.0	0.15	25.0000		102	80 - 120			
Matrix Spike (B1J0096-MS1)			**Source: 2102089-02**		Prepared: 10/6/2021 Analyzed: 10/7/2021					
Cadmium	26.8851	1.0	0.14	25.0000	3.38305	94.0	62 - 116			
Lead	224.110	1.0	0.18	25.0000	222.682	5.71	26 - 161			M2
Zinc	2812.60	10	1.5	25.0000	2836.59	-96.0	8 - 170			M2
Matrix Spike Dup (B1J0096-MSD1)			**Source: 2102089-02**		Prepared: 10/6/2021 Analyzed: 10/7/2021					
Cadmium	27.9507	1.0	0.14	25.0000	3.38305	98.3	62 - 116	3.89	20	
Lead	263.747	1.0	0.18	25.0000	222.682	164	26 - 161	16.2	20	M2
Zinc	2508.59	10	1.5	25.0000	2836.59	-1310	8 - 170	11.4	20	M2

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Irvine , CA 92612		Reported :	10/07/2021

SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
PTO1	2102089-01	Soil	10/06/21 11:05	10/06/21 13:52
PTO1A	2102089-02	Soil	10/06/21 11:15	10/06/21 13:52
PTO4	2102089-03	Soil	10/06/21 11:18	10/06/21 13:52
PTO4A	2102089-04	Soil	10/06/21 11:20	10/06/21 13:52
PTO2	2102089-05	Soil	10/06/21 11:28	10/06/21 13:52
PTO3	2102089-06	Soil	10/06/21 11:35	10/06/21 13:52
PTO5	2102089-07	Soil	10/06/21 11:42	10/06/21 13:52
PTO5A	2102089-08	Soil	10/06/21 11:45	10/06/21 13:52
PTO6	2102089-09	Soil	10/06/21 11:50	10/06/21 13:52
PTO7	2102089-10	Soil	10/06/21 11:56	10/06/21 13:52
PTO8A	2102089-11	Soil	10/06/21 12:06	10/06/21 13:52
PTO8B	2102089-12	Soil	10/06/21 12:11	10/06/21 13:52
PTO8C	2102089-13	Soil	10/06/21 12:20	10/06/21 13:52
PTO8	2102089-14	Soil	10/06/21 12:23	10/06/21 13:52
Temp Blank	2102089-15	Water	10/06/21 10:00	10/06/21 13:52

Certificate of Analysis

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DETECTION SUMMARY

Client Sample ID PTO1

Lab ID: 2102089-01

Total Metals by ICP-AES EPA 6010B **Analyst: EN**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Cadmium	**3.8**	1.0	1	B1J0096	10/06/2021	10/07/21 11:58	
Lead	**230**	1.0	1	B1J0096	10/06/2021	10/07/21 11:58	
Zinc	**3200**	10	10	B1J0096	10/06/2021	10/07/21 15:55	

Client Sample ID PTO1A

Lab ID: 2102089-02

Total Metals by ICP-AES EPA 6010B **Analyst: EN**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Cadmium	**3.4**	1.0	1	B1J0096	10/06/2021	10/07/21 11:52	
Lead	**220**	1.0	1	B1J0096	10/06/2021	10/07/21 11:52	
Zinc	**2800**	10	10	B1J0096	10/06/2021	10/07/21 13:15	

Client Sample ID PTO4

Lab ID: 2102089-03

Total Metals by ICP-AES EPA 6010B **Analyst: EN**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Cadmium	**13**	1.0	1	B1J0096	10/06/2021	10/07/21 12:00	
Lead	**770**	1.0	1	B1J0096	10/06/2021	10/07/21 12:00	
Zinc	**8000**	10	10	B1J0096	10/06/2021	10/07/21 13:19	

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SA Santa Ana
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DETECTION SUMMARY

Client Sample ID PTO4A

Lab ID: 2102089-04

Total Metals by ICP-AES EPA 6010B **Analyst: EN**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Cadmium	**7.5**	1.0	1	B1J0096	10/06/2021	10/07/21 12:01	
Lead	**500**	1.0	1	B1J0096	10/06/2021	10/07/21 12:01	
Zinc	**4100**	10	10	B1J0096	10/06/2021	10/07/21 13:21	

Client Sample ID PTO2

Lab ID: 2102089-05

Total Metals by ICP-AES EPA 6010B **Analyst: EN**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Cadmium	**19**	1.0	1	B1J0096	10/06/2021	10/07/21 12:10	
Lead	**1100**	1.0	1	B1J0096	10/06/2021	10/07/21 12:10	
Zinc	**5700**	10	10	B1J0096	10/06/2021	10/07/21 13:23	

Client Sample ID PTO3

Lab ID: 2102089-06

Total Metals by ICP-AES EPA 6010B **Analyst: EN**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Cadmium	**29**	1.0	1	B1J0096	10/06/2021	10/07/21 12:12	
Lead	**1400**	1.0	1	B1J0096	10/06/2021	10/07/21 12:12	
Zinc	**9700**	10	10	B1J0096	10/06/2021	10/07/21 13:24	

Certificate of Analysis

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DETECTION SUMMARY

Client Sample ID PTO5

Lab ID: 2102089-07

Total Metals by ICP-AES EPA 6010B **Analyst: EN**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Cadmium	**26**	1.0	1	B1J0096	10/06/2021	10/07/21 12:14	
Lead	**1300**	1.0	1	B1J0096	10/06/2021	10/07/21 12:14	
Zinc	**8700**	10	10	B1J0096	10/06/2021	10/07/21 13:26	

Client Sample ID PTO5A

Lab ID: 2102089-08

Total Metals by ICP-AES EPA 6010B **Analyst: EN**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Cadmium	**13**	1.0	1	B1J0096	10/06/2021	10/07/21 12:15	
Lead	**740**	1.0	1	B1J0096	10/06/2021	10/07/21 12:15	
Zinc	**5300**	10	10	B1J0096	10/06/2021	10/07/21 13:27	

Client Sample ID PTO6

Lab ID: 2102089-09

Total Metals by ICP-AES EPA 6010B **Analyst: EN**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Cadmium	**25**	1.0	1	B1J0096	10/06/2021	10/07/21 12:17	
Lead	**1200**	1.0	1	B1J0096	10/06/2021	10/07/21 12:17	
Zinc	**7900**	10	10	B1J0096	10/06/2021	10/07/21 13:29	

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SA Santa Ana
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Irvine , CA 92612		Reported :	10/07/2021

DETECTION SUMMARY

Client Sample ID PTO7

Lab ID: 2102089-10

Total Metals by ICP-AES EPA 6010B **Analyst: EN**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Cadmium	**24**	1.0	1	B1J0096	10/06/2021	10/07/21 12:19	
Lead	**1200**	1.0	1	B1J0096	10/06/2021	10/07/21 12:19	
Zinc	**8700**	10	10	B1J0096	10/06/2021	10/07/21 13:34	

Client Sample ID PTO8A

Lab ID: 2102089-11

Total Metals by ICP-AES EPA 6010B **Analyst: EN**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Cadmium	**1.5**	1.0	1	B1J0096	10/06/2021	10/07/21 13:37	
Lead	**150**	1.0	1	B1J0096	10/06/2021	10/07/21 13:37	
Zinc	**1100**	1.0	1	B1J0096	10/06/2021	10/07/21 13:37	

Client Sample ID PTO8B

Lab ID: 2102089-12

Total Metals by ICP-AES EPA 6010B **Analyst: EN**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Cadmium	**2.2**	1.0	1	B1J0096	10/06/2021	10/07/21 13:39	
Lead	**210**	1.0	1	B1J0096	10/06/2021	10/07/21 13:39	
Zinc	**1300**	1.0	1	B1J0096	10/06/2021	10/07/21 13:39	

Certificate of Analysis

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DETECTION SUMMARY

Client Sample ID PTO8C

Lab ID: 2102089-13

Total Metals by ICP-AES EPA 6010B **Analyst: EN**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Cadmium	**1.2**	1.0	1	B1J0096	10/06/2021	10/07/21 13:41	
Lead	**170**	1.0	1	B1J0096	10/06/2021	10/07/21 13:41	
Zinc	**790**	1.0	1	B1J0096	10/06/2021	10/07/21 13:41	

Client Sample ID PTO8

Lab ID: 2102089-14

Total Metals by ICP-AES EPA 6010B **Analyst: EN**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Cadmium	**4.1**	1.0	1	B1J0096	10/06/2021	10/07/21 12:25	
Lead	**410**	1.0	1	B1J0096	10/06/2021	10/07/21 12:25	
Zinc	**2700**	10	10	B1J0096	10/06/2021	10/07/21 13:42	

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SA Santa Ana
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Irvine , CA 92612		Reported :	10/07/2021

Client Sample ID: PTO1

Lab ID: 2102089-01

Total Metals by ICP-AES EPA 6010B **Analyst: EN**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Cadmium	**3.8**	1.0	1	B1J0096	10/06/2021	10/07/21 11:58	
Lead	**230**	1.0	1	B1J0096	10/06/2021	10/07/21 11:58	
Zinc	**3200**	10	10	B1J0096	10/06/2021	10/07/21 15:55	

Certificate of Analysis

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Irvine , CA 92612		Reported :	10/07/2021

Client Sample ID: PTO1A

Lab ID: 2102089-02

Total Metals by ICP-AES EPA 6010B **Analyst: EN**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Cadmium	**3.4**	1.0	1	B1J0096	10/06/2021	10/07/21 11:52	
Lead	**220**	1.0	1	B1J0096	10/06/2021	10/07/21 11:52	
Zinc	**2800**	10	10	B1J0096	10/06/2021	10/07/21 13:15	

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Irvine , CA 92612		Reported :	10/07/2021

Client Sample ID: PTO4

Lab ID: 2102089-03

Total Metals by ICP-AES EPA 6010B **Analyst: EN**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Cadmium	**13**	1.0	1	B1J0096	10/06/2021	10/07/21 12:00	
Lead	**770**	1.0	1	B1J0096	10/06/2021	10/07/21 12:00	
Zinc	**8000**	10	10	B1J0096	10/06/2021	10/07/21 13:19	

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Client Sample ID: PTO4A

Lab ID: 2102089-04

Total Metals by ICP-AES EPA 6010B **Analyst: EN**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Cadmium	**7.5**	1.0	1	B1J0096	10/06/2021	10/07/21 12:01	
Lead	**500**	1.0	1	B1J0096	10/06/2021	10/07/21 12:01	
Zinc	**4100**	10	10	B1J0096	10/06/2021	10/07/21 13:21	

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Irvine , CA 92612		Reported :	10/07/2021

Client Sample ID: PTO2

Lab ID: 2102089-05

Total Metals by ICP-AES EPA 6010B **Analyst: EN**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Cadmium	**19**	1.0	1	B1J0096	10/06/2021	10/07/21 12:10	
Lead	**1100**	1.0	1	B1J0096	10/06/2021	10/07/21 12:10	
Zinc	**5700**	10	10	B1J0096	10/06/2021	10/07/21 13:23	

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SA Santa Ana
19200 Von Karman Ave., Suite 800		Report To :	Vinnie Robino
Irvine , CA 92612		Reported :	10/07/2021

Client Sample ID: PTO3

Lab ID: 2102089-06

Total Metals by ICP-AES EPA 6010B **Analyst: EN**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Cadmium	**29**	1.0	1	B1J0096	10/06/2021	10/07/21 12:12	
Lead	**1400**	1.0	1	B1J0096	10/06/2021	10/07/21 12:12	
Zinc	**9700**	10	10	B1J0096	10/06/2021	10/07/21 13:24	

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SA Santa Ana
19200 Von Karman Ave., Suite 800		Report To :	Vinnie Robino
Irvine , CA 92612		Reported :	10/07/2021

Client Sample ID: PTO5

Lab ID: 2102089-07

Total Metals by ICP-AES EPA 6010B **Analyst: EN**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Cadmium	**26**	1.0	1	B1J0096	10/06/2021	10/07/21 12:14	
Lead	**1300**	1.0	1	B1J0096	10/06/2021	10/07/21 12:14	
Zinc	**8700**	10	10	B1J0096	10/06/2021	10/07/21 13:26	

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Irvine , CA 92612		Reported :	10/07/2021

Client Sample ID: PTO5A

Lab ID: 2102089-08

Total Metals by ICP-AES EPA 6010B **Analyst: EN**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Cadmium	**13**	1.0	1	B1J0096	10/06/2021	10/07/21 12:15	
Lead	**740**	1.0	1	B1J0096	10/06/2021	10/07/21 12:15	
Zinc	**5300**	10	10	B1J0096	10/06/2021	10/07/21 13:27	

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SA Santa Ana
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Irvine , CA 92612		Reported :	10/07/2021

Client Sample ID: PTO6

Lab ID: 2102089-09

Total Metals by ICP-AES EPA 6010B **Analyst: EN**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Cadmium	**25**	1.0	1	B1J0096	10/06/2021	10/07/21 12:17	
Lead	**1200**	1.0	1	B1J0096	10/06/2021	10/07/21 12:17	
Zinc	**7900**	10	10	B1J0096	10/06/2021	10/07/21 13:29	

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SA Santa Ana
19200 Von Karman Ave., Suite 800		Report To :	Vinnie Robino
Irvine , CA 92612		Reported :	10/07/2021

Client Sample ID: PTO7

Lab ID: 2102089-10

Total Metals by ICP-AES EPA 6010B **Analyst: EN**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Cadmium	**24**	1.0	1	B1J0096	10/06/2021	10/07/21 12:19	
Lead	**1200**	1.0	1	B1J0096	10/06/2021	10/07/21 12:19	
Zinc	**8700**	10	10	B1J0096	10/06/2021	10/07/21 13:34	

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SA Santa Ana
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Irvine , CA 92612		Reported :	10/07/2021

Client Sample ID: PTO8A

Lab ID: 2102089-11

Total Metals by ICP-AES EPA 6010B **Analyst: EN**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Cadmium	**1.5**	1.0	1	B1J0096	10/06/2021	10/07/21 13:37	
Lead	**150**	1.0	1	B1J0096	10/06/2021	10/07/21 13:37	
Zinc	**1100**	1.0	1	B1J0096	10/06/2021	10/07/21 13:37	

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SA Santa Ana
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Irvine , CA 92612		Reported :	10/07/2021

Client Sample ID: PTO8B

Lab ID: 2102089-12

Total Metals by ICP-AES EPA 6010B **Analyst: EN**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Cadmium	**2.2**	1.0	1	B1J0096	10/06/2021	10/07/21 13:39	
Lead	**210**	1.0	1	B1J0096	10/06/2021	10/07/21 13:39	
Zinc	**1300**	1.0	1	B1J0096	10/06/2021	10/07/21 13:39	

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SA Santa Ana
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Irvine , CA 92612		Reported :	10/07/2021

Client Sample ID: PTO8C

Lab ID: 2102089-13

Total Metals by ICP-AES EPA 6010B **Analyst: EN**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Cadmium	**1.2**	1.0	1	B1J0096	10/06/2021	10/07/21 13:41	
Lead	**170**	1.0	1	B1J0096	10/06/2021	10/07/21 13:41	
Zinc	**790**	1.0	1	B1J0096	10/06/2021	10/07/21 13:41	

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SA Santa Ana
19200 Von Karman Ave., Suite 800		Report To :	Vinnie Robino
Irvine , CA 92612		Reported :	10/07/2021

Client Sample ID: PTO8

Lab ID: 2102089-14

Total Metals by ICP-AES EPA 6010B **Analyst: EN**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Cadmium	**4.1**	1.0	1	B1J0096	10/06/2021	10/07/21 12:25	
Lead	**410**	1.0	1	B1J0096	10/06/2021	10/07/21 12:25	
Zinc	**2700**	10	10	B1J0096	10/06/2021	10/07/21 13:42	

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SA Santa Ana
19200 Von Karman Ave., Suite 800		Report To :	Vinnie Robino
Irvine , CA 92612		Reported :	10/07/2021

Client Sample ID: Temp Blank

Lab ID: 2102089-15

Total Metals by ICP-AES EPA 6010B **Analyst: en**

Analyte	Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Cadmium	ND	0.0030	1	B1J0120	10/07/2021	10/07/21 16:52	
Lead	ND	0.0050	1	B1J0120	10/07/2021	10/07/21 16:52	
Zinc	ND	0.025	1	B1J0120	10/07/2021	10/07/21 16:52	

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SA Santa Ana
19200 Von Karman Ave., Suite 800		Report To :	Vinnie Robino
Irvine , CA 92612		Reported :	10/07/2021

QUALITY CONTROL SECTION

Total Metals by ICP-AES EPA 6010B - Quality Control

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B1J0096 - EPA 3050B_S										
Blank (B1J0096-BLK1)					Prepared: 10/6/2021 Analyzed: 10/7/2021					
Cadmium	ND	1.0	0.14							
Lead	ND	1.0	0.18							
Zinc	ND	1.0	0.15							
LCS (B1J0096-BS1)					Prepared: 10/6/2021 Analyzed: 10/7/2021					
Cadmium	25.3083	1.0	0.14	25.0000		101	80 - 120			
Lead	25.4424	1.0	0.18	25.0000		102	80 - 120			
Zinc	25.6132	1.0	0.15	25.0000		102	80 - 120			
Matrix Spike (B1J0096-MS1)			**Source: 2102089-02**		Prepared: 10/6/2021 Analyzed: 10/7/2021					
Cadmium	26.8851	1.0	0.14	25.0000	3.38305	94.0	62 - 116			
Lead	224.110	1.0	0.18	25.0000	222.682	5.71	26 - 161			M2
Zinc	2812.60	10	1.5	25.0000	2836.59	-96.0	8 - 170			M2
Matrix Spike Dup (B1J0096-MSD1)			**Source: 2102089-02**		Prepared: 10/6/2021 Analyzed: 10/7/2021					
Cadmium	27.9507	1.0	0.14	25.0000	3.38305	98.3	62 - 116	3.89	20	
Lead	263.747	1.0	0.18	25.0000	222.682	164	26 - 161	16.2	20	M2
Zinc	2508.59	10	1.5	25.0000	2836.59	-1310	8 - 170	11.4	20	M2

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SA Santa Ana
19200 Von Karman Ave., Suite 800		Report To :	Vinnie Robino
Irvine , CA 92612		Reported :	10/07/2021

Total Metals by ICP-AES EPA 6010B - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B1J0120 - EPA 3010A_W										
Blank (B1J0120-BLK1)					Prepared: 10/7/2021 Analyzed: 10/7/2021					
Cadmium	ND	0.0030	0.0024							
Lead	ND	0.0050	0.0047							
Zinc	ND	0.025	0.0057							
LCS (B1J0120-BS1)					Prepared: 10/7/2021 Analyzed: 10/7/2021					
Cadmium	0.465920	0.0030	0.0024	0.500000		93.2	80 - 120			
Lead	0.451190	0.0050	0.0047	0.500000		90.2	80 - 120			
Zinc	0.447988	0.025	0.0057	0.500000		89.6	80 - 120			
Duplicate (B1J0120-DUP1)			**Source: 2102081-09**		Prepared: 10/7/2021 Analyzed: 10/7/2021					
Cadmium	ND	0.0030	0.0024		ND			NR	20	
Lead	ND	0.0050	0.0047		ND			NR	20	
Zinc	ND	0.025	0.0057		ND			NR	20	
Matrix Spike (B1J0120-MS1)			**Source: 2102081-09**		Prepared: 10/7/2021 Analyzed: 10/7/2021					
Cadmium	0.454158	0.0030	0.0024	0.500000	ND	90.8	68 - 136			
Lead	0.444727	0.0050	0.0047	0.500000	ND	88.9	58 - 146			
Zinc	0.441538	0.025	0.0057	0.500000	ND	88.3	53 - 144			
Matrix Spike Dup (B1J0120-MSD1)			**Source: 2102081-09**		Prepared: 10/7/2021 Analyzed: 10/7/2021					
Cadmium	0.477574	0.0030	0.0024	0.500000	ND	95.5	68 - 136	5.03	20	
Lead	0.470955	0.0050	0.0047	0.500000	ND	94.2	58 - 146	5.73	20	
Zinc	0.465096	0.025	0.0057	0.500000	ND	93.0	53 - 144	5.20	20	

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SA Santa Ana
19200 Von Karman Ave., Suite 800		Report To :	Vinnie Robino
Irvine , CA 92612		Reported :	10/07/2021

Notes and Definitions

M2	Matrix spike recovery outside of acceptance limit due to possible matrix interference. The analytical batch was validated by the laboratory control sample.
ND	Analyte is not detected at or above the Practical Quantitation Limit (PQL). When client requests quantitation against MDL, analyte is not detected at or above the Method Detection Limit (MDL)
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
NR	Not Reported
RPD	Relative Percent Difference
CA2	CA-ELAP (CDPH)
OR1	OR-NELAP (OSPHL)

Notes:
(1) The reported MDL and PQL are based on prep ratio variation and analytical dilution.
(2) The suffix [2C] of specific analytes signifies that the reported result is taken from the instrument's second column.
(3) Results are wet unless otherwise specified.

GSI ENVIRONMENTAL

CHAIN-OF-CUSTODY RECORD
Date: 10-6-2021
Page 1 of 1

2102089

FROM: GSI Environmental Inc. 19200 Von Karman Ave, Suite 800 Irvine, CA 92612 (949) 679-1070	PROJECT NAME: SA Terminal Island
	PROJECT CONTACT: ~~Edric Caballero~~ Vinnie Robino VR.
	GLOBAL ID:
	PROJECT NO.: 113-710
	LAB CONTACT: Edric Caballero
	SAMPLER(S): (PRINT) V. Robino / T. Wood
TEL: (949) 679-1070	E-MAIL: vprobino@gsienv.com
LABORATORY: ATL - Signal Hill	
TURNAROUND TIME: ☐ SAME DAY ☐ 24 HR ☐ 48 HR ☐ 72 HR ☐ 5 DAYS ☐ STANDARD	
SPECIAL INSTRUCTIONS:	

REQUESTED ANALYSES
Please check box or fill in blank as needed.

LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME (VR)	MATRIX	NO. OF CONT.	Unpreserved	Preserved	Field Filtered	HOLD
-01	PT01	10/6/21	~~1005~~ 1105		2				X
-02	PT01A		1115		1				X
-03	PT04		1118		1				X
-04	PT04A		1120		1				X
-05	PT02		1128		2				X
-06	PT03		1135		2				X
-07	PT05		1142		2				X
-08	PT05A		1145		1				X
-09	PT06		1150		2				X
-10	PT07		1156		2				X
-11	PT08A		1206		2				X
-12	PT08B		1211		1				X
-13	PT08C		1220		1				X
-14	PT08		1223		2				X
-15	Temp blank		1000		1				X

Relinquished by: (Signature)	10/6/2021	Received by: (Signature)	Date: 10/6/2021 Time: 13:52
Relinquished by: (Signature)		Received by: (Signature)	Date: Time:
Relinquished by: (Signature)		Received by: (Signature)	Date: Time:

6.8 ice

ADVANCED TECHNOLOGY LABORATORIES

January 21, 2022

Timothy Wood/ Vinnie Robino/Josh Voss
GSI Environmental, Inc.
19200 Von Karman Ave., Suite 800
Irvine, CA 92612
Tel: (949) 679-1070
Fax:

ELAP No.: 1838
CSDLAC No.: 10196
ORELAP No.: CA300003

Re: ATL Work Order Number : 2102631
Client Reference : SATI / 6013

Enclosed are the results for sample(s) received on December 22, 2021 by Advanced Technology Laboratories. The sample(s) are tested for the parameters as indicated on the enclosed chain of custody in accordance with applicable laboratory certifications. The laboratory results contained in this report specifically pertains to the sample(s) submitted.

Thank you for the opportunity to serve the needs of your company. If you have any questions, please feel free to contact me or Project.Management@atlglobal.com.

Sincerely,

Victoria Michel

for

Victoria Michel, Project Assistant
Victoria.Michel@atlglobal.com
Authorized to Release on 01/21/22 14:16 on Behalf of

Amy Leung
Laboratory Director

The test results in this report relate exclusively to the samples as received by the laboratory, and meet the requirements of the methodology under which they were reported; any exceptions are noted within the report and/ or case narrative.

The cover letter/ signature page and the case narrative are integral parts of this analytical report; the absence of any portion of the report renders the report invalid. This report shall not be reproduced except in full, and shall have the express written approval of the laboratory, and the original client firm to do so

.

The electronic signature on this report is signed by an authorized signatory of Advanced Technology Laboratories, and is intended to be legally binding as the equivalent of a handwritten signature.

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612		Reported :	01/21/2022

SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
PT02-A	2102631-01	Soil	12/22/21 8:30	12/22/21 15:35
Sample 4	2102631-02	Soil	12/22/21 11:00	12/22/21 15:35
Sample 5	2102631-03	Soil	12/22/21 8:20	12/22/21 15:35
Sample 6	2102631-04	Soil	12/22/21 9:15	12/22/21 15:35
Sample 7	2102631-05	Soil	12/22/21 9:30	12/22/21 15:35
Sample 8	2102631-06	Soil	12/22/21 10:30	12/22/21 15:35
Sample 9	2102631-07	Soil	12/22/21 10:55	12/22/21 15:35
Sample 10	2102631-08	Soil	12/22/21 11:20	12/22/21 15:35
Sample 11	2102631-09	Soil	12/22/21 11:30	12/22/21 15:35

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612		Reported :	01/21/2022

Percent Moisture

Analyte: Percent Moisture **Analyst: AM3**

Laboratory ID	Client Sample ID	Result	Units	PQL	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
2102631-01	PT02-A	**ND**	ɔ by Weight dı	0.10	1	B1L1545	12/27/2021	12/27/21 15:43	
2102631-02	Sample 4	**1.6**	ɔ by Weight dı	0.10	1	B1L1545	12/27/2021	12/27/21 15:43	
2102631-03	Sample 5	**9.5**	ɔ by Weight dı	0.11	1	B1L1545	12/27/2021	12/27/21 15:43	
2102631-04	Sample 6	**23**	ɔ by Weight dı	0.12	1	B1L1545	12/27/2021	12/27/21 15:43	
2102631-05	Sample 7	**9.7**	ɔ by Weight dı	0.11	1	B1L1545	12/27/2021	12/27/21 15:43	
2102631-06	Sample 8	**17**	ɔ by Weight dı	0.12	1	B1L1545	12/27/2021	12/27/21 15:43	
2102631-07	Sample 9	**22**	ɔ by Weight dı	0.12	1	B1L1545	12/27/2021	12/27/21 15:43	
2102631-08	Sample 10	**1.2**	ɔ by Weight dı	0.10	1	B1L1545	12/27/2021	12/27/21 15:43	
2102631-09	Sample 11	**12**	ɔ by Weight dı	0.11	1	B1L1545	12/27/2021	12/27/21 15:43	

Hexavalent Chromium by EPA 7196A/3060A

Analyte: Hexavalent Chromium **Analyst: VJ**

Laboratory ID	Client Sample ID	Result	Units	PQL	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
2102631-01	PT02-A	**18**	mg/kg dry	1.0	1	B1L1524	12/27/2021	12/28/21 15:53	
2102631-02	Sample 4	**14**	mg/kg dry	1.0	1	B1L1524	12/27/2021	12/28/21 15:53	
2102631-03	Sample 5	**260**	mg/kg dry	11	10	B1L1524	12/27/2021	12/28/21 15:53	
2102631-04	Sample 6	**6.7**	mg/kg dry	1.2	1	B1L1524	12/27/2021	12/28/21 15:53	
2102631-05	Sample 7	**6.0**	mg/kg dry	1.1	1	B1L1524	12/27/2021	12/28/21 15:53	
2102631-06	Sample 8	**7.0**	mg/kg dry	1.2	1	B1L1524	12/27/2021	12/28/21 15:53	
2102631-07	Sample 9	**75**	mg/kg dry	1.2	1	B1L1524	12/27/2021	12/28/21 15:53	
2102631-08	Sample 10	**3.0**	mg/kg dry	1.0	1	B1L1524	12/27/2021	12/28/21 15:53	
2102631-09	Sample 11	**18**	mg/kg dry	1.1	1	B1L1524	12/27/2021	12/28/21 15:53	

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612		Reported :	01/21/2022

Mercury by AA (Cold Vapor) EPA 7471A

Analyte: Mercury **Analyst: AEG**

Laboratory ID	Client Sample ID	Result	Units	PQL	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
2102631-01	PT02-A	**1.9**	mg/kg dry	0.50	5	B1L1530	12/27/2021	12/27/21 16:03	
2102631-02	Sample 4	**2.6**	mg/kg dry	0.51	5	B1L1530	12/27/2021	12/27/21 16:23	
2102631-03	Sample 5	**0.30**	mg/kg dry	0.11	1	B1L1530	12/27/2021	12/27/21 15:46	
2102631-04	Sample 6	**0.26**	mg/kg dry	0.12	1	B1L1530	12/27/2021	12/27/21 15:49	
2102631-05	Sample 7	**0.20**	mg/kg dry	0.11	1	B1L1530	12/27/2021	12/27/21 15:51	
2102631-06	Sample 8	**0.13**	mg/kg dry	0.12	1	B1L1530	12/27/2021	12/27/21 15:53	
2102631-07	Sample 9	**ND**	mg/kg dry	0.12	1	B1L1530	12/27/2021	12/27/21 15:56	
2102631-08	Sample 10	**ND**	mg/kg dry	0.10	1	B1L1530	12/27/2021	12/27/21 15:58	
2102631-09	Sample 11	**2.6**	mg/kg dry	0.56	5	B1L1530	12/27/2021	12/27/21 16:25	

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612		Reported :	01/21/2022

Client Sample ID PT02-A
Lab ID: 2102631-01

Title 22 Metals by ICP-AES EPA 6010B

Analyst: EM

Analyte	Result (mg/kg dry)	PQL (mg/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	**7.6**	2.0	1	B1L1532	12/27/2021	12/28/21 12:50	
Arsenic	**7.4**	1.0	1	B1L1532	12/27/2021	12/28/21 12:50	
Barium	**540**	1.0	1	B1L1532	12/27/2021	12/28/21 12:50	
Beryllium	ND	1.0	1	B1L1532	12/27/2021	12/28/21 12:50	
Cadmium	**16**	1.0	1	B1L1532	12/27/2021	12/28/21 12:50	
Chromium	**160**	1.0	1	B1L1532	12/27/2021	12/28/21 12:50	
Cobalt	**20**	1.0	1	B1L1532	12/27/2021	12/28/21 12:50	
Copper	**390**	2.0	1	B1L1532	12/27/2021	12/28/21 12:50	
Lead	**1000**	1.0	1	B1L1532	12/27/2021	12/28/21 12:50	
Molybdenum	**22**	1.0	1	B1L1532	12/27/2021	12/28/21 12:50	
Nickel	**140**	1.0	1	B1L1532	12/27/2021	12/28/21 12:50	
Selenium	ND	1.0	1	B1L1532	12/27/2021	12/28/21 12:50	
Silver	**2.6**	1.0	1	B1L1532	12/27/2021	12/28/21 12:50	
Thallium	ND	1.0	1	B1L1532	12/27/2021	12/28/21 12:50	
Vanadium	**52**	1.0	1	B1L1532	12/27/2021	12/28/21 12:50	
Zinc	**5500**	5.0	5	B1L1532	12/27/2021	12/28/21 15:39	

Diesel Range Organics by EPA 8015B

Analyst: KL

Analyte	Result (mg/kg dry)	PQL (mg/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	ND	2000	200	B1L1539	12/27/2021	12/29/21 23:45	D1
ORO	ND	2000	200	B1L1539	12/27/2021	12/29/21 23:45	D1
Surrogate: p-Terphenyl	*132 %*	*62 - 141*		B1L1539	12/27/2021	*12/29/21 23:45*	

Polychlorinated Biphenyls by EPA 8082

Analyst: KL

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aroclor 1016	ND	80	5	B1L1575	12/29/2021	12/29/21 16:31	D1
Aroclor 1016	**63**	16	1	B2A0964	01/14/2022	01/14/22 19:11	H3
Aroclor 1221	ND	80	5	B1L1575	12/29/2021	12/29/21 16:31	D1
Aroclor 1221	ND	16	1	B2A0964	01/14/2022	01/14/22 19:11	H3
Aroclor 1232	ND	80	5	B1L1575	12/29/2021	12/29/21 16:31	D1
Aroclor 1232	ND	16	1	B2A0964	01/14/2022	01/14/22 19:11	H3
Aroclor 1242	ND	80	5	B1L1575	12/29/2021	12/29/21 16:31	D1
Aroclor 1242	ND	16	1	B2A0964	01/14/2022	01/14/22 19:11	H3
Aroclor 1248	ND	80	5	B1L1575	12/29/2021	12/29/21 16:31	D1
Aroclor 1248	ND	16	1	B2A0964	01/14/2022	01/14/22 19:11	H3
Aroclor 1254	ND	80	5	B1L1575	12/29/2021	12/29/21 16:31	D1

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612		Reported :	01/21/2022

Client Sample ID PT02-A
Lab ID: 2102631-01

Polychlorinated Biphenyls by EPA 8082

Analyst: KL

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aroclor 1254	**120**	16	1	B2A0964	01/14/2022	01/14/22 19:11	H3
Aroclor 1260	ND	80	5	B1L1575	12/29/2021	12/29/21 16:31	D1
Aroclor 1260	**85**	16	1	B2A0964	01/14/2022	01/14/22 19:11	H3
Surrogate: Decachlorobiphenyl	*41.7 %*	*0 - 128.73*		B1L1575	12/29/2021	*12/29/21 16:31*	
Surrogate: Decachlorobiphenyl	*34.5 %*	*0 - 128.73*		B2A0964	01/14/2022	*01/14/22 19:11*	
Surrogate: Tetrachloro-m-xylene	*31.1 %*	*0 - 126.7*		B1L1575	12/29/2021	*12/29/21 16:31*	
Surrogate: Tetrachloro-m-xylene	*26.8 %*	*0 - 126.7*		B2A0964	01/14/2022	*01/14/22 19:11*	

Semivolatile Organic Compounds by EPA 8270C

Analyst: KL

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
bis(2-ethylhexyl)phthalate	ND	160000	500	B1L1579	12/29/2021	12/29/21 22:50	D1
Butylbenzylphthalate	ND	160000	500	B1L1579	12/29/2021	12/29/21 22:50	D1
Di-n-butylphthalate	ND	160000	500	B1L1579	12/29/2021	12/29/21 22:50	D1
Di-n-octylphthalate	ND	160000	500	B1L1579	12/29/2021	12/29/21 22:50	D1
Diethyl phthalate	ND	160000	500	B1L1579	12/29/2021	12/29/21 22:50	D1
Dimethyl phthalate	ND	160000	500	B1L1579	12/29/2021	12/29/21 22:50	D1
Surrogate: 1,2-Dichlorobenzene-d4	*0%*	*23 - 102*		B1L1579	12/29/2021	*12/29/21 22:50*	S4
Surrogate: 2,4,6-Tribromophenol	*0%*	*3 - 138*		B1L1579	12/29/2021	*12/29/21 22:50*	S4
Surrogate: 2-Chlorophenol-d4	*0%*	*18 - 105*		B1L1579	12/29/2021	*12/29/21 22:50*	S4
Surrogate: 2-Fluorobiphenyl	*0%*	*34 - 106*		B1L1579	12/29/2021	*12/29/21 22:50*	S4
Surrogate: 2-Fluorophenol	*0%*	*16 - 94*		B1L1579	12/29/2021	*12/29/21 22:50*	S4
Surrogate: 4-Terphenyl-d14	*0%*	*31 - 130*		B1L1579	12/29/2021	*12/29/21 22:50*	S4
Surrogate: Nitrobenzene-d5	*0%*	*23 - 102*		B1L1579	12/29/2021	*12/29/21 22:50*	S4
Surrogate: Phenol-d6	*0%*	*14 - 104*		B1L1579	12/29/2021	*12/29/21 22:50*	S4

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612		Reported :	01/21/2022

Client Sample ID Sample 4
Lab ID: 2102631-02

Title 22 Metals by ICP-AES EPA 6010B

Analyst: EM

Analyte	Result (mg/kg dry)	PQL (mg/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	1	B1L1532	12/27/2021	12/28/21 12:52	
Arsenic	**11**	1.0	1	B1L1532	12/27/2021	12/28/21 12:52	
Barium	**650**	1.0	1	B1L1532	12/27/2021	12/28/21 12:52	
Beryllium	ND	1.0	1	B1L1532	12/27/2021	12/28/21 12:52	
Cadmium	**29**	1.0	1	B1L1532	12/27/2021	12/28/21 12:52	
Chromium	**240**	1.0	1	B1L1532	12/27/2021	12/28/21 12:52	
Cobalt	**27**	1.0	1	B1L1532	12/27/2021	12/28/21 12:52	
Copper	**570**	2.0	1	B1L1532	12/27/2021	12/28/21 12:52	
Lead	**1200**	1.0	1	B1L1532	12/27/2021	12/28/21 12:52	
Molybdenum	**33**	1.0	1	B1L1532	12/27/2021	12/28/21 12:52	
Nickel	**220**	1.0	1	B1L1532	12/27/2021	12/28/21 12:52	
Selenium	ND	1.0	1	B1L1532	12/27/2021	12/28/21 12:52	
Silver	**4.0**	1.0	1	B1L1532	12/27/2021	12/28/21 12:52	
Thallium	ND	1.0	1	B1L1532	12/27/2021	12/28/21 12:52	
Vanadium	**90**	1.0	1	B1L1532	12/27/2021	12/28/21 12:52	
Zinc	**11000**	10	10	B1L1532	12/27/2021	12/28/21 15:40	

Diesel Range Organics by EPA 8015B

Analyst: KL

Analyte	Result (mg/kg dry)	PQL (mg/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	ND	1000	100	B1L1539	12/27/2021	12/30/21 00:05	D1
ORO	ND	1000	100	B1L1539	12/27/2021	12/30/21 00:05	D1
Surrogate: p-Terphenyl	*176 %*	*62 - 141*		B1L1539	12/27/2021	*12/30/21 00:05*	S4

Polychlorinated Biphenyls by EPA 8082

Analyst: KL

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aroclor 1016	**220**	16	1	B2A0964	01/14/2022	01/14/22 19:30	H3
Aroclor 1016	ND	81	5	B1L1575	12/29/2021	12/29/21 16:50	D1
Aroclor 1221	ND	16	1	B2A0964	01/14/2022	01/14/22 19:30	H3
Aroclor 1221	ND	81	5	B1L1575	12/29/2021	12/29/21 16:50	D1
Aroclor 1232	ND	81	5	B1L1575	12/29/2021	12/29/21 16:50	D1
Aroclor 1232	ND	16	1	B2A0964	01/14/2022	01/14/22 19:30	H3
Aroclor 1242	ND	81	5	B1L1575	12/29/2021	12/29/21 16:50	D1
Aroclor 1242	ND	16	1	B2A0964	01/14/2022	01/14/22 19:30	H3
Aroclor 1248	ND	81	5	B1L1575	12/29/2021	12/29/21 16:50	D1
Aroclor 1248	ND	16	1	B2A0964	01/14/2022	01/14/22 19:30	H3
Aroclor 1254	ND	81	5	B1L1575	12/29/2021	12/29/21 16:50	D1

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612		Reported :	01/21/2022

Client Sample ID Sample 4
Lab ID: 2102631-02

Polychlorinated Biphenyls by EPA 8082 **Analyst: KL**

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aroclor 1254	**400**	33	2	B2A0964	01/14/2022	01/14/22 19:30	H3
Aroclor 1260	ND	81	5	B1L1575	12/29/2021	12/29/21 16:50	D1
Aroclor 1260	**240**	16	1	B2A0964	01/14/2022	01/14/22 19:30	H3
Surrogate: Decachlorobiphenyl	*63.4 %*	*0 - 128.73*		B1L1575	12/29/2021	*12/29/21 16:50*	
Surrogate: Decachlorobiphenyl	*57.7 %*	*0 - 128.73*		B2A0964	01/14/2022	*01/14/22 19:30*	
Surrogate: Tetrachloro-m-xylene	*35.1 %*	*0 - 126.7*		B1L1575	12/29/2021	*12/29/21 16:50*	
Surrogate: Tetrachloro-m-xylene	*38.7 %*	*0 - 126.7*		B2A0964	01/14/2022	*01/14/22 19:30*	

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612		Reported :	01/21/2022

Client Sample ID Sample 5
Lab ID: 2102631-03

Title 22 Metals by ICP-AES EPA 6010B

Analyst: EM

Analyte	Result (mg/kg dry)	PQL (mg/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.2	1	B1L1532	12/27/2021	12/28/21 12:54	
Arsenic	**4.3**	1.1	1	B1L1532	12/27/2021	12/28/21 12:54	
Barium	**410**	1.1	1	B1L1532	12/27/2021	12/28/21 12:54	
Beryllium	ND	1.1	1	B1L1532	12/27/2021	12/28/21 12:54	
Cadmium	**2.8**	1.1	1	B1L1532	12/27/2021	12/28/21 12:54	
Chromium	**400**	1.1	1	B1L1532	12/27/2021	12/28/21 12:54	
Cobalt	**8.4**	1.1	1	B1L1532	12/27/2021	12/28/21 12:54	
Copper	**410**	2.2	1	B1L1532	12/27/2021	12/28/21 12:54	
Lead	**1600**	1.1	1	B1L1532	12/27/2021	12/28/21 12:54	
Molybdenum	**9.8**	1.1	1	B1L1532	12/27/2021	12/28/21 12:54	
Nickel	**51**	1.1	1	B1L1532	12/27/2021	12/28/21 12:54	
Selenium	ND	1.1	1	B1L1532	12/27/2021	12/28/21 12:54	
Silver	ND	1.1	1	B1L1532	12/27/2021	12/28/21 12:54	
Thallium	ND	1.1	1	B1L1532	12/27/2021	12/28/21 12:54	
Vanadium	**46**	1.1	1	B1L1532	12/27/2021	12/28/21 12:54	
Zinc	**3100**	5.5	5	B1L1532	12/27/2021	12/28/21 15:42	

Diesel Range Organics by EPA 8015B

Analyst: KL

Analyte	Result (mg/kg dry)	PQL (mg/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	ND	2200	200	B1L1539	12/27/2021	12/30/21 00:26	D1
ORO	ND	2200	200	B1L1539	12/27/2021	12/30/21 00:26	D1
Surrogate: p-Terphenyl	*93.7 %*	*62 - 141*		B1L1539	12/27/2021	*12/30/21 00:26*	

Polychlorinated Biphenyls by EPA 8082

Analyst: KL

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aroclor 1016	ND	88	5	B1L1575	12/29/2021	12/29/21 17:09	D1
Aroclor 1016	**120**	18	1	B2A0964	01/14/2022	01/14/22 19:49	H3
Aroclor 1221	ND	88	5	B1L1575	12/29/2021	12/29/21 17:09	D1
Aroclor 1221	ND	18	1	B2A0964	01/14/2022	01/14/22 19:49	H3
Aroclor 1232	ND	88	5	B1L1575	12/29/2021	12/29/21 17:09	D1
Aroclor 1232	ND	18	1	B2A0964	01/14/2022	01/14/22 19:49	H3
Aroclor 1242	ND	88	5	B1L1575	12/29/2021	12/29/21 17:09	D1
Aroclor 1242	ND	18	1	B2A0964	01/14/2022	01/14/22 19:49	H3
Aroclor 1248	ND	88	5	B1L1575	12/29/2021	12/29/21 17:09	D1
Aroclor 1248	ND	18	1	B2A0964	01/14/2022	01/14/22 19:49	H3
Aroclor 1254	ND	88	5	B1L1575	12/29/2021	12/29/21 17:09	D1
Aroclor 1254	**270**	18	1	B2A0964	01/14/2022	01/14/22 19:49	H3

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612		Reported :	01/21/2022

Client Sample ID Sample 5
Lab ID: 2102631-03

Polychlorinated Biphenyls by EPA 8082

Analyst: KL

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aroclor 1260	ND	88	5	B1L1575	12/29/2021	12/29/21 17:09	D1
Aroclor 1260	**200**	18	1	B2A0964	01/14/2022	01/14/22 19:49	H3
Surrogate: Decachlorobiphenyl	*28.7 %*	*0 - 128.73*		B1L1575	12/29/2021	*12/29/21 17:09*	
Surrogate: Decachlorobiphenyl	*18.7 %*	*0 - 128.73*		B2A0964	01/14/2022	*01/14/22 19:49*	
Surrogate: Tetrachloro-m-xylene	*40.6 %*	*0 - 126.7*		B1L1575	12/29/2021	*12/29/21 17:09*	
Surrogate: Tetrachloro-m-xylene	*23.4 %*	*0 - 126.7*		B2A0964	01/14/2022	*01/14/22 19:49*	

Semivolatile Organic Compounds by EPA 8270C

Analyst: KL

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
bis(2-ethylhexyl)phthalate	ND	180000	500	B1L1579	12/29/2021	12/29/21 23:43	D1
Butylbenzylphthalate	ND	180000	500	B1L1579	12/29/2021	12/29/21 23:43	D1
Di-n-butylphthalate	ND	180000	500	B1L1579	12/29/2021	12/29/21 23:43	D1
Di-n-octylphthalate	ND	180000	500	B1L1579	12/29/2021	12/29/21 23:43	D1
Diethyl phthalate	ND	180000	500	B1L1579	12/29/2021	12/29/21 23:43	D1
Dimethyl phthalate	ND	180000	500	B1L1579	12/29/2021	12/29/21 23:43	D1
Surrogate: 1,2-Dichlorobenzene-d4	*290 %*	*23 - 102*		B1L1579	12/29/2021	*12/29/21 23:43*	S4
Surrogate: 2,4,6-Tribromophenol	*0%*	*3 - 138*		B1L1579	12/29/2021	*12/29/21 23:43*	S4
Surrogate: 2-Chlorophenol-d4	*0%*	*18 - 105*		B1L1579	12/29/2021	*12/29/21 23:43*	S4
Surrogate: 2-Fluorobiphenyl	*0%*	*34 - 106*		B1L1579	12/29/2021	*12/29/21 23:43*	S4
Surrogate: 2-Fluorophenol	*0%*	*16 - 94*		B1L1579	12/29/2021	*12/29/21 23:43*	S4
Surrogate: 4-Terphenyl-d14	*0%*	*31 - 130*		B1L1579	12/29/2021	*12/29/21 23:43*	S4
Surrogate: Nitrobenzene-d5	*0%*	*23 - 102*		B1L1579	12/29/2021	*12/29/21 23:43*	S4
Surrogate: Phenol-d6	*0%*	*14 - 104*		B1L1579	12/29/2021	*12/29/21 23:43*	S4

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612		Reported :	01/21/2022

Client Sample ID Sample 6
Lab ID: 2102631-04

Title 22 Metals by ICP-AES EPA 6010B

Analyst: EM

Analyte	Result (mg/kg dry)	PQL (mg/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.5	1	B1L1532	12/27/2021	12/28/21 12:55	
Arsenic	**4.0**	1.2	1	B1L1532	12/27/2021	12/28/21 12:55	
Barium	**130**	1.2	1	B1L1532	12/27/2021	12/28/21 12:55	
Beryllium	ND	1.2	1	B1L1532	12/27/2021	12/28/21 12:55	
Cadmium	**2.9**	1.2	1	B1L1532	12/27/2021	12/28/21 12:55	
Chromium	**69**	1.2	1	B1L1532	12/27/2021	12/28/21 12:55	
Cobalt	**8.0**	1.2	1	B1L1532	12/27/2021	12/28/21 12:55	
Copper	**110**	2.5	1	B1L1532	12/27/2021	12/28/21 12:55	
Lead	**300**	1.2	1	B1L1532	12/27/2021	12/28/21 12:55	
Molybdenum	**8.2**	1.2	1	B1L1532	12/27/2021	12/28/21 12:55	
Nickel	**39**	1.2	1	B1L1532	12/27/2021	12/28/21 12:55	
Selenium	ND	1.2	1	B1L1532	12/27/2021	12/28/21 12:55	
Silver	ND	1.2	1	B1L1532	12/27/2021	12/28/21 12:55	
Thallium	ND	1.2	1	B1L1532	12/27/2021	12/28/21 12:55	
Vanadium	**41**	1.2	1	B1L1532	12/27/2021	12/28/21 12:55	
Zinc	**20000**	12	10	B1L1532	12/27/2021	12/28/21 15:51	

Diesel Range Organics by EPA 8015B

Analyst: KL

Analyte	Result (mg/kg dry)	PQL (mg/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	ND	2500	200	B1L1539	12/27/2021	12/30/21 00:47	D1
ORO	ND	2500	200	B1L1539	12/27/2021	12/30/21 00:47	D1
Surrogate: p-Terphenyl	*57.8 %*	*62 - 141*		B1L1539	12/27/2021	*12/30/21 00:47*	S4

Polychlorinated Biphenyls by EPA 8082

Analyst: KL

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aroclor 1016	**51**	20	1	B2A0964	01/14/2022	01/14/22 20:08	H3
Aroclor 1016	ND	98	5	B1L1575	12/29/2021	12/29/21 17:28	D1
Aroclor 1221	ND	20	1	B2A0964	01/14/2022	01/14/22 20:08	H3
Aroclor 1221	ND	98	5	B1L1575	12/29/2021	12/29/21 17:28	D1
Aroclor 1232	ND	98	5	B1L1575	12/29/2021	12/29/21 17:28	D1
Aroclor 1232	ND	20	1	B2A0964	01/14/2022	01/14/22 20:08	H3
Aroclor 1242	ND	98	5	B1L1575	12/29/2021	12/29/21 17:28	D1
Aroclor 1242	ND	20	1	B2A0964	01/14/2022	01/14/22 20:08	H3
Aroclor 1248	ND	98	5	B1L1575	12/29/2021	12/29/21 17:28	D1
Aroclor 1248	ND	20	1	B2A0964	01/14/2022	01/14/22 20:08	H3
Aroclor 1254	ND	98	5	B1L1575	12/29/2021	12/29/21 17:28	D1
Aroclor 1254	**120**	20	1	B2A0964	01/14/2022	01/14/22 20:08	H3

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612		Reported :	01/21/2022

Client Sample ID Sample 6
Lab ID: 2102631-04

Polychlorinated Biphenyls by EPA 8082 **Analyst: KL**

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aroclor 1260	ND	98	5	B1L1575	12/29/2021	12/29/21 17:28	D1
Aroclor 1260	**80**	20	1	B2A0964	01/14/2022	01/14/22 20:08	H3
Surrogate: Decachlorobiphenyl	*33.2 %*	*0 - 128.73*		B1L1575	12/29/2021	*12/29/21 17:28*	
Surrogate: Decachlorobiphenyl	*31.4 %*	*0 - 128.73*		B2A0964	01/14/2022	*01/14/22 20:08*	
Surrogate: Tetrachloro-m-xylene	*33.6 %*	*0 - 126.7*		B1L1575	12/29/2021	*12/29/21 17:28*	
Surrogate: Tetrachloro-m-xylene	*27.8 %*	*0 - 126.7*		B2A0964	01/14/2022	*01/14/22 20:08*	

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612		Reported :	01/21/2022

Client Sample ID Sample 7
Lab ID: 2102631-05

Title 22 Metals by ICP-AES EPA 6010B

Analyst: EM

Analyte	Result (mg/kg dry)	PQL (mg/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.2	1	B1L1532	12/27/2021	12/28/21 12:57	
Arsenic	**3.0**	1.1	1	B1L1532	12/27/2021	12/28/21 12:57	
Barium	**170**	1.1	1	B1L1532	12/27/2021	12/28/21 12:57	
Beryllium	ND	1.1	1	B1L1532	12/27/2021	12/28/21 12:57	
Cadmium	**3.9**	1.1	1	B1L1532	12/27/2021	12/28/21 12:57	
Chromium	**76**	1.1	1	B1L1532	12/27/2021	12/28/21 12:57	
Cobalt	**7.9**	1.1	1	B1L1532	12/27/2021	12/28/21 12:57	
Copper	**92**	2.2	1	B1L1532	12/27/2021	12/28/21 12:57	
Lead	**420**	1.1	1	B1L1532	12/27/2021	12/28/21 12:57	
Molybdenum	**8.1**	1.1	1	B1L1532	12/27/2021	12/28/21 12:57	
Nickel	**41**	1.1	1	B1L1532	12/27/2021	12/28/21 12:57	
Selenium	ND	1.1	1	B1L1532	12/27/2021	12/28/21 12:57	
Silver	ND	1.1	1	B1L1532	12/27/2021	12/28/21 12:57	
Thallium	ND	1.1	1	B1L1532	12/27/2021	12/28/21 12:57	
Vanadium	**42**	1.1	1	B1L1532	12/27/2021	12/28/21 12:57	
Zinc	**6200**	11	10	B1L1532	12/27/2021	12/28/21 15:53	

Diesel Range Organics by EPA 8015B

Analyst: KL

Analyte	Result (mg/kg dry)	PQL (mg/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	ND	2200	200	B1L1539	12/27/2021	12/30/21 01:07	D1
ORO	ND	2200	200	B1L1539	12/27/2021	12/30/21 01:07	D1
Surrogate: p-Terphenyl	*172 %*	*62 - 141*		B1L1539	12/27/2021	*12/30/21 01:07*	S4

Polychlorinated Biphenyls by EPA 8082

Analyst: KL

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aroclor 1016	**160**	18	1	B2A0964	01/14/2022	01/14/22 20:26	H3
Aroclor 1016	ND	88	5	B1L1575	12/29/2021	12/29/21 17:47	D1
Aroclor 1221	ND	18	1	B2A0964	01/14/2022	01/14/22 20:26	H3
Aroclor 1221	ND	88	5	B1L1575	12/29/2021	12/29/21 17:47	D1
Aroclor 1232	ND	88	5	B1L1575	12/29/2021	12/29/21 17:47	D1
Aroclor 1232	ND	18	1	B2A0964	01/14/2022	01/14/22 20:26	H3
Aroclor 1242	ND	88	5	B1L1575	12/29/2021	12/29/21 17:47	D1
Aroclor 1242	ND	18	1	B2A0964	01/14/2022	01/14/22 20:26	H3
Aroclor 1248	ND	88	5	B1L1575	12/29/2021	12/29/21 17:47	D1
Aroclor 1248	ND	18	1	B2A0964	01/14/2022	01/14/22 20:26	H3
Aroclor 1254	ND	88	5	B1L1575	12/29/2021	12/29/21 17:47	D1
Aroclor 1254	**290**	18	1	B2A0964	01/14/2022	01/14/22 20:26	H3

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612		Reported :	01/21/2022

Client Sample ID Sample 7
Lab ID: 2102631-05

Polychlorinated Biphenyls by EPA 8082 **Analyst: KL**

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aroclor 1260	ND	88	5	B1L1575	12/29/2021	12/29/21 17:47	D1
Aroclor 1260	**210**	18	1	B2A0964	01/14/2022	01/14/22 20:26	H3
Surrogate: Decachlorobiphenyl	*41.0 %*	*0 - 128.73*		B1L1575	12/29/2021	*12/29/21 17:47*	
Surrogate: Decachlorobiphenyl	*16.8 %*	*0 - 128.73*		B2A0964	01/14/2022	*01/14/22 20:26*	
Surrogate: Tetrachloro-m-xylene	*43.5 %*	*0 - 126.7*		B1L1575	12/29/2021	*12/29/21 17:47*	
Surrogate: Tetrachloro-m-xylene	*21.3 %*	*0 - 126.7*		B2A0964	01/14/2022	*01/14/22 20:26*	

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612		Reported :	01/21/2022

Client Sample ID Sample 8
Lab ID: 2102631-06

Title 22 Metals by ICP-AES EPA 6010B

Analyst: EM

Analyte	Result (mg/kg dry)	PQL (mg/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.3	1	B1L1532	12/27/2021	12/28/21 12:59	
Arsenic	**2.7**	1.2	1	B1L1532	12/27/2021	12/28/21 12:59	
Barium	**450**	1.2	1	B1L1532	12/27/2021	12/28/21 12:59	
Beryllium	ND	1.2	1	B1L1532	12/27/2021	12/28/21 12:59	
Cadmium	**3.5**	1.2	1	B1L1532	12/27/2021	12/28/21 12:59	
Chromium	**100**	1.2	1	B1L1532	12/27/2021	12/28/21 12:59	
Cobalt	**9.8**	1.2	1	B1L1532	12/27/2021	12/28/21 12:59	
Copper	**160**	2.3	1	B1L1532	12/27/2021	12/28/21 12:59	
Lead	**180**	1.2	1	B1L1532	12/27/2021	12/28/21 12:59	
Molybdenum	**11**	1.2	1	B1L1532	12/27/2021	12/28/21 12:59	
Nickel	**48**	1.2	1	B1L1532	12/27/2021	12/28/21 12:59	
Selenium	ND	1.2	1	B1L1532	12/27/2021	12/28/21 12:59	
Silver	**1.3**	1.2	1	B1L1532	12/27/2021	12/28/21 12:59	
Thallium	ND	1.2	1	B1L1532	12/27/2021	12/28/21 12:59	
Vanadium	**27**	1.2	1	B1L1532	12/27/2021	12/28/21 12:59	
Zinc	**2500**	1.2	1	B1L1532	12/27/2021	12/28/21 12:59	

Diesel Range Organics by EPA 8015B

Analyst: KL

Analyte	Result (mg/kg dry)	PQL (mg/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	ND	2300	200	B1L1539	12/27/2021	12/30/21 01:28	D1
ORO	ND	2300	200	B1L1539	12/27/2021	12/30/21 01:28	D1
Surrogate: p-Terphenyl	*165 %*	*62 - 141*		B1L1539	12/27/2021	*12/30/21 01:28*	S4

Polychlorinated Biphenyls by EPA 8082

Analyst: KL

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aroclor 1016	**74**	19	1	B2A0964	01/14/2022	01/14/22 20:45	H3
Aroclor 1016	ND	94	5	B1L1575	12/29/2021	12/29/21 18:06	D1
Aroclor 1221	ND	19	1	B2A0964	01/14/2022	01/14/22 20:45	H3
Aroclor 1221	ND	94	5	B1L1575	12/29/2021	12/29/21 18:06	D1
Aroclor 1232	ND	94	5	B1L1575	12/29/2021	12/29/21 18:06	D1
Aroclor 1232	ND	19	1	B2A0964	01/14/2022	01/14/22 20:45	H3
Aroclor 1242	ND	94	5	B1L1575	12/29/2021	12/29/21 18:06	D1
Aroclor 1242	ND	19	1	B2A0964	01/14/2022	01/14/22 20:45	H3
Aroclor 1248	ND	94	5	B1L1575	12/29/2021	12/29/21 18:06	D1
Aroclor 1248	ND	19	1	B2A0964	01/14/2022	01/14/22 20:45	H3
Aroclor 1254	ND	94	5	B1L1575	12/29/2021	12/29/21 18:06	D1

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612		Reported :	01/21/2022

Client Sample ID Sample 8
Lab ID: 2102631-06

Polychlorinated Biphenyls by EPA 8082 **Analyst: KL**

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aroclor 1254	**120**	19	1	B2A0964	01/14/2022	01/14/22 20:45	H3
Aroclor 1260	ND	94	5	B1L1575	12/29/2021	12/29/21 18:06	D1
Aroclor 1260	**110**	19	1	B2A0964	01/14/2022	01/14/22 20:45	H3
Surrogate: Decachlorobiphenyl	*61.7 %*	*0 - 128.73*		B1L1575	12/29/2021	*12/29/21 18:06*	
Surrogate: Decachlorobiphenyl	*16.6 %*	*0 - 128.73*		B2A0964	01/14/2022	*01/14/22 20:45*	
Surrogate: Tetrachloro-m-xylene	*40.1 %*	*0 - 126.7*		B1L1575	12/29/2021	*12/29/21 18:06*	
Surrogate: Tetrachloro-m-xylene	*20.2 %*	*0 - 126.7*		B2A0964	01/14/2022	*01/14/22 20:45*	

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612		Reported :	01/21/2022

Client Sample ID Sample 9
Lab ID: 2102631-07

Title 22 Metals by ICP-AES EPA 6010B

Analyst: EM

Analyte	Result (mg/kg dry)	PQL (mg/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.4	1	B1L1532	12/27/2021	12/28/21 13:02	
Arsenic	**1.6**	1.2	1	B1L1532	12/27/2021	12/28/21 13:02	
Barium	**150**	1.2	1	B1L1532	12/27/2021	12/28/21 13:02	
Beryllium	ND	1.2	1	B1L1532	12/27/2021	12/28/21 13:02	
Cadmium	**2.4**	1.2	1	B1L1532	12/27/2021	12/28/21 13:02	
Chromium	**70**	1.2	1	B1L1532	12/27/2021	12/28/21 13:02	
Cobalt	**7.4**	1.2	1	B1L1532	12/27/2021	12/28/21 13:02	
Copper	**94**	2.4	1	B1L1532	12/27/2021	12/28/21 13:02	
Lead	**120**	1.2	1	B1L1532	12/27/2021	12/28/21 13:02	
Molybdenum	**8.7**	1.2	1	B1L1532	12/27/2021	12/28/21 13:02	
Nickel	**34**	1.2	1	B1L1532	12/27/2021	12/28/21 13:02	
Selenium	ND	1.2	1	B1L1532	12/27/2021	12/28/21 13:02	
Silver	ND	1.2	1	B1L1532	12/27/2021	12/28/21 13:02	
Thallium	ND	1.2	1	B1L1532	12/27/2021	12/28/21 13:02	
Vanadium	**27**	1.2	1	B1L1532	12/27/2021	12/28/21 13:02	
Zinc	**2000**	1.2	1	B1L1532	12/27/2021	12/28/21 13:02	

Diesel Range Organics by EPA 8015B

Analyst: KL

Analyte	Result (mg/kg dry)	PQL (mg/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	ND	2400	200	B1L1539	12/27/2021	12/30/21 01:48	D1
ORO	ND	2400	200	B1L1539	12/27/2021	12/30/21 01:48	D1
Surrogate: p-Terphenyl	*126 %*	*62 - 141*		B1L1539	12/27/2021	*12/30/21 01:48*	

Polychlorinated Biphenyls by EPA 8082

Analyst: KL

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aroclor 1016	ND	98	5	B1L1575	12/29/2021	12/29/21 18:25	D1
Aroclor 1016	**120**	20	1	B2A0964	01/14/2022	01/14/22 21:04	H3
Aroclor 1221	ND	20	1	B2A0964	01/14/2022	01/14/22 21:04	H3
Aroclor 1221	ND	98	5	B1L1575	12/29/2021	12/29/21 18:25	D1
Aroclor 1232	ND	98	5	B1L1575	12/29/2021	12/29/21 18:25	D1
Aroclor 1232	ND	20	1	B2A0964	01/14/2022	01/14/22 21:04	H3
Aroclor 1242	ND	20	1	B2A0964	01/14/2022	01/14/22 21:04	H3
Aroclor 1242	ND	98	5	B1L1575	12/29/2021	12/29/21 18:25	D1
Aroclor 1248	ND	20	1	B2A0964	01/14/2022	01/14/22 21:04	H3
Aroclor 1248	ND	98	5	B1L1575	12/29/2021	12/29/21 18:25	D1
Aroclor 1254	**150**	20	1	B2A0964	01/14/2022	01/14/22 21:04	H3
Aroclor 1254	ND	98	5	B1L1575	12/29/2021	12/29/21 18:25	D1

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612		Reported :	01/21/2022

Client Sample ID Sample 9
Lab ID: 2102631-07

Polychlorinated Biphenyls by EPA 8082 **Analyst: KL**

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aroclor 1260	**200**	20	1	B2A0964	01/14/2022	01/14/22 21:04	H3
Aroclor 1260	ND	98	5	B1L1575	12/29/2021	12/29/21 18:25	D1
Surrogate: Decachlorobiphenyl	*16.3 %*	*0 - 128.73*		B2A0964	01/14/2022	*01/14/22 21:04*	
Surrogate: Decachlorobiphenyl	*34.1 %*	*0 - 128.73*		B1L1575	12/29/2021	*12/29/21 18:25*	
Surrogate: Tetrachloro-m-xylene	*161 %*	*0 - 126.7*		B1L1575	12/29/2021	*12/29/21 18:25*	S4
Surrogate: Tetrachloro-m-xylene	*27.3 %*	*0 - 126.7*		B2A0964	01/14/2022	*01/14/22 21:04*	

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612		Reported :	01/21/2022

Client Sample ID Sample 10
Lab ID: 2102631-08

Title 22 Metals by ICP-AES EPA 6010B

Analyst: EM

Analyte	Result (mg/kg dry)	PQL (mg/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	1	B1L1532	12/27/2021	12/28/21 13:03	
Arsenic	**2.7**	1.0	1	B1L1532	12/27/2021	12/28/21 13:03	
Barium	**120**	1.0	1	B1L1532	12/27/2021	12/28/21 13:03	
Beryllium	ND	1.0	1	B1L1532	12/27/2021	12/28/21 13:03	
Cadmium	**2.4**	1.0	1	B1L1532	12/27/2021	12/28/21 13:03	
Chromium	**53**	1.0	1	B1L1532	12/27/2021	12/28/21 13:03	
Cobalt	**6.3**	1.0	1	B1L1532	12/27/2021	12/28/21 13:03	
Copper	**91**	2.0	1	B1L1532	12/27/2021	12/28/21 13:03	
Lead	**79**	1.0	1	B1L1532	12/27/2021	12/28/21 13:03	
Molybdenum	**7.7**	1.0	1	B1L1532	12/27/2021	12/28/21 13:03	
Nickel	**30**	1.0	1	B1L1532	12/27/2021	12/28/21 13:03	
Selenium	ND	1.0	1	B1L1532	12/27/2021	12/28/21 13:03	
Silver	ND	1.0	1	B1L1532	12/27/2021	12/28/21 13:03	
Thallium	ND	1.0	1	B1L1532	12/27/2021	12/28/21 13:03	
Vanadium	**26**	1.0	1	B1L1532	12/27/2021	12/28/21 13:03	
Zinc	**2900**	5.1	5	B1L1532	12/27/2021	12/28/21 15:55	

Diesel Range Organics by EPA 8015B

Analyst: KL

Analyte	Result (mg/kg dry)	PQL (mg/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	ND	2000	200	B1L1539	12/27/2021	12/30/21 02:09	D1
ORO	ND	2000	200	B1L1539	12/27/2021	12/30/21 02:09	D1
Surrogate: p-Terphenyl	*112 %*	*62 - 141*		B1L1539	12/27/2021	*12/30/21 02:09*	

Polychlorinated Biphenyls by EPA 8082

Analyst: KL

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aroclor 1016	**84**	16	1	B2A0964	01/14/2022	01/14/22 21:23	H3
Aroclor 1016	ND	81	5	B1L1575	12/29/2021	12/29/21 18:44	D1
Aroclor 1221	ND	16	1	B2A0964	01/14/2022	01/14/22 21:23	H3
Aroclor 1221	ND	81	5	B1L1575	12/29/2021	12/29/21 18:44	D1
Aroclor 1232	ND	81	5	B1L1575	12/29/2021	12/29/21 18:44	D1
Aroclor 1232	ND	16	1	B2A0964	01/14/2022	01/14/22 21:23	H3
Aroclor 1242	ND	16	1	B2A0964	01/14/2022	01/14/22 21:23	H3
Aroclor 1242	ND	81	5	B1L1575	12/29/2021	12/29/21 18:44	D1
Aroclor 1248	ND	16	1	B2A0964	01/14/2022	01/14/22 21:23	H3
Aroclor 1248	ND	81	5	B1L1575	12/29/2021	12/29/21 18:44	D1
Aroclor 1254	ND	81	5	B1L1575	12/29/2021	12/29/21 18:44	D1
Aroclor 1254	**93**	16	1	B2A0964	01/14/2022	01/14/22 21:23	H3

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612		Reported :	01/21/2022

Client Sample ID Sample 10
Lab ID: 2102631-08

Polychlorinated Biphenyls by EPA 8082 **Analyst: KL**

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aroclor 1260	**120**	16	1	B2A0964	01/14/2022	01/14/22 21:23	H3
Aroclor 1260	ND	81	5	B1L1575	12/29/2021	12/29/21 18:44	D1
Surrogate: Decachlorobiphenyl	*44.2 %*	*0 - 128.73*		B1L1575	12/29/2021	*12/29/21 18:44*	
Surrogate: Decachlorobiphenyl	*19.8 %*	*0 - 128.73*		B2A0964	01/14/2022	*01/14/22 21:23*	
Surrogate: Tetrachloro-m-xylene	*35.0 %*	*0 - 126.7*		B2A0964	01/14/2022	*01/14/22 21:23*	
Surrogate: Tetrachloro-m-xylene	*46.1 %*	*0 - 126.7*		B1L1575	12/29/2021	*12/29/21 18:44*	

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612		Reported :	01/21/2022

Client Sample ID Sample 11
Lab ID: 2102631-09

Title 22 Metals by ICP-AES EPA 6010B

Analyst: EM

Analyte	Result (mg/kg dry)	PQL (mg/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	**3.6**	2.2	1	B1L1532	12/27/2021	12/28/21 13:31	
Arsenic	**8.7**	1.1	1	B1L1532	12/27/2021	12/28/21 13:31	
Barium	**550**	1.1	1	B1L1532	12/27/2021	12/28/21 13:31	
Beryllium	ND	1.1	1	B1L1532	12/27/2021	12/28/21 13:31	
Cadmium	**17**	1.1	1	B1L1532	12/27/2021	12/28/21 13:31	
Chromium	**320**	1.1	1	B1L1532	12/27/2021	12/28/21 13:31	
Cobalt	**23**	1.1	1	B1L1532	12/27/2021	12/28/21 13:31	
Copper	**440**	2.2	1	B1L1532	12/27/2021	12/28/21 13:31	
Lead	**1100**	1.1	1	B1L1532	12/27/2021	12/28/21 13:31	
Molybdenum	**29**	1.1	1	B1L1532	12/27/2021	12/28/21 13:31	
Nickel	**200**	1.1	1	B1L1532	12/27/2021	12/28/21 13:31	
Selenium	ND	1.1	1	B1L1532	12/27/2021	12/28/21 13:31	
Silver	**2.9**	1.1	1	B1L1532	12/27/2021	12/28/21 13:31	
Thallium	ND	1.1	1	B1L1532	12/27/2021	12/28/21 13:31	
Vanadium	**68**	1.1	1	B1L1532	12/27/2021	12/28/21 13:31	
Zinc	**7100**	11	10	B1L1532	12/27/2021	12/28/21 15:57	

Diesel Range Organics by EPA 8015B

Analyst: KL

Analyte	Result (mg/kg dry)	PQL (mg/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	ND	2200	200	B1L1539	12/27/2021	12/30/21 02:29	D1
ORO	ND	2200	200	B1L1539	12/27/2021	12/30/21 02:29	D1
Surrogate: p-Terphenyl	*138 %*	*62 - 141*		B1L1539	12/27/2021	*12/30/21 02:29*	

Polychlorinated Biphenyls by EPA 8082

Analyst: KL

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aroclor 1016	ND	90	5	B1L1575	12/29/2021	12/29/21 19:02	D1
Aroclor 1016	**140**	18	1	B2A0964	01/14/2022	01/14/22 21:42	H3
Aroclor 1221	ND	18	1	B2A0964	01/14/2022	01/14/22 21:42	H3
Aroclor 1221	ND	90	5	B1L1575	12/29/2021	12/29/21 19:02	D1
Aroclor 1232	ND	90	5	B1L1575	12/29/2021	12/29/21 19:02	D1
Aroclor 1232	ND	18	1	B2A0964	01/14/2022	01/14/22 21:42	H3
Aroclor 1242	ND	18	1	B2A0964	01/14/2022	01/14/22 21:42	H3
Aroclor 1242	ND	90	5	B1L1575	12/29/2021	12/29/21 19:02	D1
Aroclor 1248	ND	18	1	B2A0964	01/14/2022	01/14/22 21:42	H3
Aroclor 1248	ND	90	5	B1L1575	12/29/2021	12/29/21 19:02	D1
Aroclor 1254	**280**	18	1	B2A0964	01/14/2022	01/14/22 21:42	H3

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612		Reported :	01/21/2022

Client Sample ID Sample 11
Lab ID: 2102631-09

Polychlorinated Biphenyls by EPA 8082 **Analyst: KL**

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aroclor 1254	ND	90	5	B1L1575	12/29/2021	12/29/21 19:02	D1
Aroclor 1260	**170**	18	1	B2A0964	01/14/2022	01/14/22 21:42	H3
Aroclor 1260	ND	90	5	B1L1575	12/29/2021	12/29/21 19:02	D1
Surrogate: Decachlorobiphenyl	*27.1 %*	*0 - 128.73*		B2A0964	01/14/2022	*01/14/22 21:42*	
Surrogate: Decachlorobiphenyl	*47.2 %*	*0 - 128.73*		B1L1575	12/29/2021	*12/29/21 19:02*	
Surrogate: Tetrachloro-m-xylene	*33.9 %*	*0 - 126.7*		B1L1575	12/29/2021	*12/29/21 19:02*	
Surrogate: Tetrachloro-m-xylene	*16.9 %*	*0 - 126.7*		B2A0964	01/14/2022	*01/14/22 21:42*	

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612		Reported :	01/21/2022

QUALITY CONTROL SECTION

Percent Moisture - Quality Control

Analyte	Result (% by Weight)	PQL (% by Weight)	MDL (% by Weight)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B1L1545 - No_Prep_WC1_S										
Duplicate (B1L1545-DUP1)			**Source: 2102631-01**			Prepared: 12/27/2021 Analyzed: 12/27/2021				
Percent Moisture	ND	0.10	0.10		ND			NR	30	

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612		Reported :	01/21/2022

Title 22 Metals by ICP-AES EPA 6010B - Quality Control

Analyte	Result (mg/kg wet)	PQL (mg/kg wet)	MDL (mg/kg wet)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B1L1532 - EPA 3050B_S										
Blank (B1L1532-BLK1)						Prepared: 12/27/2021 Analyzed: 12/28/2021				
Antimony	ND	2.0	0.51							
Arsenic	ND	1.0	0.12							
Barium	ND	1.0	0.12							
Beryllium	ND	1.0	0.03							
Cadmium	ND	1.0	0.14							
Chromium	ND	1.0	0.26							
Cobalt	ND	1.0	0.07							
Copper	ND	2.0	0.19							
Lead	ND	1.0	0.18							
Molybdenum	ND	1.0	0.12							
Nickel	ND	1.0	0.18							
Selenium	ND	1.0	0.40							
Silver	ND	1.0	0.12							
Thallium	ND	1.0	0.38							
Vanadium	ND	1.0	0.06							
Zinc	ND	1.0	0.15							
LCS (B1L1532-BS1)						Prepared: 12/27/2021 Analyzed: 12/28/2021				
Antimony	26.3415	2.0	0.51	25.0000		105	80 - 120			
Arsenic	25.4541	1.0	0.12	25.0000		102	80 - 120			
Barium	26.6846	1.0	0.12	25.0000		107	80 - 120			
Beryllium	25.0246	1.0	0.03	25.0100		100	80 - 120			
Cadmium	25.7697	1.0	0.14	25.0000		103	80 - 120			
Chromium	25.3878	1.0	0.26	25.0000		102	80 - 120			
Cobalt	26.7343	1.0	0.07	25.0000		107	80 - 120			
Copper	25.6148	2.0	0.19	25.0000		102	80 - 120			
Lead	25.4536	1.0	0.18	25.0000		102	80 - 120			
Molybdenum	26.6815	1.0	0.12	25.0000		107	80 - 120			
Nickel	25.8377	1.0	0.18	25.0000		103	80 - 120			
Selenium	25.6455	1.0	0.40	25.0000		103	80 - 120			
Silver	11.5206	1.0	0.12	12.5000		92.2	80 - 120			
Thallium	25.3782	1.0	0.38	25.0000		102	80 - 120			
Vanadium	25.3360	1.0	0.06	25.0000		101	80 - 120			
Zinc	26.2399	1.0	0.15	25.0000		105	80 - 120			
Matrix Spike (B1L1532-MS1)			**Source: 2102597-30**			Prepared: 12/27/2021 Analyzed: 12/28/2021				
Antimony	13.3719	2.0	0.51	25.0000	ND	53.5	0 - 102			
Arsenic	34.3388	1.0	0.12	25.0000	6.15646	113	55 - 117			
Barium	119.951	1.0	0.12	25.0000	98.0552	87.6	11 - 177			
Beryllium	27.5892	1.0	0.03	25.0100	0.466766	108	64 - 115			
Cadmium	29.1398	1.0	0.14	25.0000	0.684454	114	62 - 116			
Chromium	46.0046	1.0	0.26	25.0000	19.1657	107	42 - 145			
Cobalt	32.1912	1.0	0.07	25.0000	5.24408	108	60 - 126			
Copper	34.7566	2.0	0.19	25.0000	6.04122	115	37 - 163			
Lead	46.7117	1.0	0.18	25.0000	20.8034	104	26 - 161			

Certificate of Analysis

GSI Environmental, Inc.	Project Number : SATI / 6013
19200 Von Karman Ave., Suite 800	Report To : Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612	Reported : 01/21/2022

Title 22 Metals by ICP-AES EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/kg wet)	PQL (mg/kg wet)	MDL (mg/kg wet)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B1L1532 - EPA 3050B_S (continued)										
Matrix Spike (B1L1532-MS1) - Continued			**Source: 2102597-30**			Prepared: 12/27/2021 Analyzed: 12/28/2021				
Molybdenum	26.8309	1.0	0.12	25.0000	ND	107	31 - 122			
Nickel	51.7090	1.0	0.18	25.0000	22.9107	115	52 - 130			
Selenium	21.2675	1.0	0.40	25.0000	ND	85.1	25 - 129			
Silver	12.7196	1.0	0.12	12.5000	ND	102	48 - 133			
Thallium	22.2119	1.0	0.38	25.0000	ND	88.8	25 - 119			
Vanadium	57.5139	1.0	0.06	25.0000	28.4225	116	51 - 141			
Zinc	80.9129	1.0	0.15	25.0000	53.3492	110	8 - 170			
Matrix Spike Dup (B1L1532-MSD1)			**Source: 2102597-30**			Prepared: 12/27/2021 Analyzed: 12/28/2021				
Antimony	14.0835	2.0	0.51	25.0000	ND	56.3	0 - 102	5.18	20	
Arsenic	33.7811	1.0	0.12	25.0000	6.15646	110	55 - 117	1.64	20	
Barium	120.230	1.0	0.12	25.0000	98.0552	88.7	11 - 177	0.232	20	
Beryllium	28.2789	1.0	0.03	25.0100	0.466766	111	64 - 115	2.47	20	
Cadmium	29.5781	1.0	0.14	25.0000	0.684454	116	62 - 116	1.49	20	
Chromium	46.0560	1.0	0.26	25.0000	19.1657	108	42 - 145	0.112	20	
Cobalt	32.4878	1.0	0.07	25.0000	5.24408	109	60 - 126	0.917	20	
Copper	34.8923	2.0	0.19	25.0000	6.04122	115	37 - 163	0.390	20	
Lead	47.3102	1.0	0.18	25.0000	20.8034	106	26 - 161	1.27	20	
Molybdenum	27.1392	1.0	0.12	25.0000	ND	109	31 - 122	1.14	20	
Nickel	51.1154	1.0	0.18	25.0000	22.9107	113	52 - 130	1.15	20	
Selenium	22.7590	1.0	0.40	25.0000	ND	91.0	25 - 129	6.78	20	
Silver	12.7102	1.0	0.12	12.5000	ND	102	48 - 133	0.0742	20	
Thallium	22.5872	1.0	0.38	25.0000	ND	90.3	25 - 119	1.68	20	
Vanadium	57.9279	1.0	0.06	25.0000	28.4225	118	51 - 141	0.717	20	
Zinc	82.2817	1.0	0.15	25.0000	53.3492	116	8 - 170	1.68	20	

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612		Reported :	01/21/2022

Hexavalent Chromium by EPA 7196A/3060A - Quality Control

Analyte	Result (mg/kg dry)	PQL (mg/kg dry)	MDL (mg/kg dry)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B1L1524 - EPA 3060A_S (WC)										
Matrix Spike (B1L1524-MS1)			**Source: 2102631-09**			Prepared: 12/27/2021 Analyzed: 12/28/2021				
Hexavalent Chromium	63.8673	1.1	0.44	56.1224	18.2959	81.2	75 - 125			
Matrix Spike (B1L1524-MS2)			**Source: 2102631-09**			Prepared: 12/27/2021 Analyzed: 12/28/2021				
Hexavalent Chromium	1498.47	56	22	1967.34	ND	76.2	75 - 125			
Matrix Spike Dup (B1L1524-MSD1)			**Source: 2102631-09**			Prepared: 12/27/2021 Analyzed: 12/28/2021				
Hexavalent Chromium	68.0204	1.1	0.44	56.1224	18.2959	88.6	75 - 125	6.30	20	

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612		Reported :	01/21/2022

Hexavalent Chromium by EPA 7196A/3060A - Quality Control

Analyte	Result (mg/kg wet)	PQL (mg/kg wet)	MDL (mg/kg wet)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B1L1524 - EPA 3060A_S (WC)										
Blank (B1L1524-BLK1)						Prepared: 12/27/2021 Analyzed: 12/28/2021				
Hexavalent Chromium	ND	1.0	0.39							
LCS (B1L1524-BS1)						Prepared: 12/27/2021 Analyzed: 12/28/2021				
Hexavalent Chromium	43.5000	1.0	0.39	50.0000		87.0	80 - 120			

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612		Reported :	01/21/2022

Mercury by AA (Cold Vapor) EPA 7471A - Quality Control

Analyte	Result (mg/kg wet)	PQL (mg/kg wet)	MDL (mg/kg wet)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B1L1530 - EPA 7471_S										
Blank (B1L1530-BLK1)						Prepared: 12/27/2021 Analyzed: 12/27/2021				
Mercury	ND	0.10	0.01							
LCS (B1L1530-BS1)						Prepared: 12/27/2021 Analyzed: 12/27/2021				
Mercury	0.457065	0.10	0.01	0.416667		110	80 - 120			
Matrix Spike (B1L1530-MS1)			**Source: 2102598-01**			Prepared: 12/27/2021 Analyzed: 12/27/2021				
Mercury	0.494304	0.10	0.01	0.416667	0.039081	109	70 - 130			
Matrix Spike Dup (B1L1530-MSD1)			**Source: 2102598-01**			Prepared: 12/27/2021 Analyzed: 12/27/2021				
Mercury	0.497598	0.10	0.01	0.416667	0.039081	110	70 - 130	0.664	20	

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612		Reported :	01/21/2022

Mercury by AA (Cold Vapor) EPA 7471A - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B1L1530 - EPA 7471_S									
Post Spike (B1L1530-PS1)			**Source: 2102598-01**		Prepared: 12/27/2021 Analyzed: 12/27/2021				
Mercury	0.005964		5.00000E-3	0.000469	110	85 - 115			

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612		Reported :	01/21/2022

Diesel Range Organics by EPA 8015B - Quality Control

Analyte	Result (mg/kg dry)	PQL (mg/kg dry)	MDL (mg/kg dry)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B1L1539 - GCSEMI_DRO_S										
Matrix Spike (B1L1539-MS1)			**Source: 2102631-01**			Prepared: 12/27/2021 Analyzed: 12/29/2021				
DRO	1138.04	2000	710	877.982	ND	130	38 - 161			
Surrogate: p-Terphenyl	*128.0*			*70.2386*		*182*	*62 - 141*			S4
Matrix Spike Dup (B1L1539-MSD1)			**Source: 2102631-01**			Prepared: 12/27/2021 Analyzed: 12/29/2021				
DRO	1025.13	2000	710	877.982	ND	117	38 - 161	10.4	20	
Surrogate: p-Terphenyl	*113.4*			*70.2386*		*162*	*62 - 141*			S4

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612		Reported :	01/21/2022

Diesel Range Organics by EPA 8015B - Quality Control

Analyte	Result (mg/kg wet)	PQL (mg/kg wet)	MDL (mg/kg wet)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B1L1539 - GCSEMI_DRO_S										
Blank (B1L1539-BLK1)						Prepared: 12/27/2021 Analyzed: 12/29/2021				
DRO	ND	10	3.6							
ORO	ND	10	3.6							
Surrogate: p-Terphenyl	*80.03*			*80.0000*		*100*	*62 - 141*			
LCS (B1L1539-BS1)						Prepared: 12/27/2021 Analyzed: 12/29/2021				
DRO	957.309	10	3.6	1000.00		95.7	56 - 139			
Surrogate: p-Terphenyl	*78.28*			*80.0000*		*97.8*	*62 - 141*			

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612		Reported :	01/21/2022

Polychlorinated Biphenyls by EPA 8082 - Quality Control

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	MDL (ug/kg dry)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B1L1575 - GCSEMI_PCB/PEST_S										
Matrix Spike (B1L1575-MS1)			**Source: 2102631-01**			Prepared: 12/29/2021 Analyzed: 12/29/2021				
Aroclor 1016	169.494	80	9.7	146.330	ND	116	0 - 150.43			
Aroclor 1260	159.871	80	9.7	146.330	ND	109	0 - 152.89			
Surrogate: Decachlorobiphenyl	*6.461*			*14.6330*		*44.2*	*0 - 128.73*			
Surrogate: Tetrachloro-m-xylene	*3.008*			*14.6330*		*20.6*	*0 - 126.7*			
Matrix Spike Dup (B1L1575-MSD1)			**Source: 2102631-01**			Prepared: 12/29/2021 Analyzed: 12/29/2021				
Aroclor 1016	308.470	80	9.7	146.330	ND	211	0 - 150.43	58.2	20	M6, R
Aroclor 1260	289.439	80	9.7	146.330	ND	198	0 - 152.89	57.7	20	M6, R
Surrogate: Decachlorobiphenyl	*8.905*			*14.6330*		*60.9*	*0 - 128.73*			
Surrogate: Tetrachloro-m-xylene	*5.521*			*14.6330*		*37.7*	*0 - 126.7*			

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612		Reported :	01/21/2022

Polychlorinated Biphenyls by EPA 8082 - Quality Control

Analyte	Result (ug/kg wet)	PQL (ug/kg wet)	MDL (ug/kg wet)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B1L1575 - GCSEMI_PCB/PEST_S										
Blank (B1L1575-BLK1)						Prepared: 12/29/2021 Analyzed: 12/29/2021				
Aroclor 1016	ND	16	1.9							
Aroclor 1221	ND	16	1.9							
Aroclor 1232	ND	16	1.9							
Aroclor 1242	ND	16	1.9							
Aroclor 1248	ND	16	1.9							
Aroclor 1254	ND	16	1.9							
Aroclor 1260	ND	16	1.9							
Surrogate: Decachlorobiphenyl	*11.39*			*16.6667*		*68.4*	*0 - 128.73*			
Surrogate: Tetrachloro-m-xylene	*10.97*			*16.6667*		*65.8*	*0 - 126.7*			
LCS (B1L1575-BS1)						Prepared: 12/29/2021 Analyzed: 12/29/2021				
Aroclor 1016	101.804	16	1.9	333.333		30.5	22.09 - 132.27			M6
Aroclor 1260	120.569	16	1.9	333.333		36.2	34.65 - 124.89			
Surrogate: Decachlorobiphenyl	*12.24*			*16.6667*		*73.4*	*0 - 128.73*			
Surrogate: Tetrachloro-m-xylene	*11.19*			*16.6667*		*67.1*	*0 - 126.7*			

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612		Reported :	01/21/2022

Polychlorinated Biphenyls by EPA 8082 - Quality Control

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	MDL (ug/kg dry)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B2A0964 - GCSEMI_PCB/PEST_S										
Matrix Spike (B2A0964-MS1)			**Source: 2102631-06RE1**			Prepared: 1/14/2022 Analyzed: 1/14/2022				
Aroclor 1016	131.663	19	2.3	195.688	74.3007	29.3	0 - 150.43			
Aroclor 1260	179.012	19	2.3	195.688	108.537	36.0	0 - 152.89			
Surrogate: Decachlorobiphenyl	*5.409*			*19.5688*		*27.6*	*0 - 128.73*			
Surrogate: Tetrachloro-m-xylene	*4.798*			*19.5688*		*24.5*	*0 - 126.7*			
Matrix Spike Dup (B2A0964-MSD1)			**Source: 2102631-06RE1**			Prepared: 1/14/2022 Analyzed: 1/14/2022				
Aroclor 1016	160.205	19	2.3	195.688	74.3007	43.9	0 - 150.43	19.6	20	
Aroclor 1260	205.284	19	2.3	195.688	108.537	49.4	0 - 152.89	13.7	20	
Surrogate: Decachlorobiphenyl	*4.188*			*19.5688*		*21.4*	*0 - 128.73*			
Surrogate: Tetrachloro-m-xylene	*4.122*			*19.5688*		*21.1*	*0 - 126.7*			

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612		Reported :	01/21/2022

Polychlorinated Biphenyls by EPA 8082 - Quality Control

Analyte	Result (ug/kg wet)	PQL (ug/kg wet)	MDL (ug/kg wet)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B2A0964 - GCSEMI_PCB/PEST_S										
Blank (B2A0964-BLK1)						Prepared: 1/14/2022 Analyzed: 1/14/2022				
Aroclor 1016	ND	16	1.9							
Aroclor 1221	ND	16	1.9							
Aroclor 1232	ND	16	1.9							
Aroclor 1242	ND	16	1.9							
Aroclor 1248	ND	16	1.9							
Aroclor 1254	ND	16	1.9							
Aroclor 1260	ND	16	1.9							
Surrogate: Decachlorobiphenyl	*11.61*			*16.6667*		*69.7*	*0 - 128.73*			
Surrogate: Tetrachloro-m-xylene	*10.30*			*16.6667*		*61.8*	*0 - 126.7*			
LCS (B2A0964-BS1)						Prepared: 1/14/2022 Analyzed: 1/14/2022				
Aroclor 1016	108.022	16	1.9	166.667		64.8	22.09 - 132.27			
Aroclor 1260	123.523	16	1.9	166.667		74.1	34.65 - 124.89			
Surrogate: Decachlorobiphenyl	*12.82*			*16.6667*		*76.9*	*0 - 128.73*			
Surrogate: Tetrachloro-m-xylene	*10.94*			*16.6667*		*65.6*	*0 - 126.7*			

Certificate of Analysis

GSI Environmental, Inc.	Project Number : SATI / 6013
19200 Von Karman Ave., Suite 800	Report To : Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612	Reported : 01/21/2022

Semivolatile Organic Compounds by EPA 8270C - Quality Control

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	MDL (ug/kg dry)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B1L1579 - MSSEMI_NAL										
Matrix Spike (B1L1579-MS1)		**Source: 2102631-03**				Prepared: 12/29/2021 Analyzed: 12/29/2021				
bis(2-ethylhexyl)phthalate	ND	180000	34000	3650.55	ND	NR	39 - 131			M6
Butylbenzylphthalate	ND	180000	23000	3650.55	ND	NR	39 - 129			M6
Di-n-butylphthalate	ND	180000	28000	3650.55	ND	NR	42 - 122			M6
Di-n-octylphthalate	ND	180000	34000	3650.55	ND	NR	30 - 147			M6
Diethyl phthalate	ND	180000	32000	3650.55	ND	NR	28 - 139			M6
Dimethyl phthalate	ND	180000	22000	3650.55	ND	NR	32 - 129			M6
Surrogate: 1,2-Dichlorobenzene-d4	*0.000*			*3650.55*		*NR*	*23 - 102*			S4
Surrogate: 2,4,6-Tribromophenol	*0.000*			*5475.82*		*NR*	*3 - 138*			S4
Surrogate: 2-Chlorophenol-d4	*0.000*			*5475.82*		*NR*	*18 - 105*			S4
Surrogate: 2-Fluorobiphenyl	*0.000*			*3650.55*		*NR*	*34 - 106*			S4
Surrogate: 2-Fluorophenol	*0.000*			*5475.82*		*NR*	*16 - 94*			S4
Surrogate: 4-Terphenyl-d14	*0.000*			*3650.55*		*NR*	*31 - 130*			S4
Surrogate: Nitrobenzene-d5	*0.000*			*3650.55*		*NR*	*23 - 102*			S4
Surrogate: Phenol-d6	*0.000*			*5475.82*		*NR*	*14 - 104*			S4
Matrix Spike Dup (B1L1579-MSD1)		**Source: 2102631-03**				Prepared: 12/29/2021 Analyzed: 12/29/2021				
bis(2-ethylhexyl)phthalate	ND	180000	34000	3650.55	ND	NR	39 - 131	NR	20	M6
Butylbenzylphthalate	ND	180000	23000	3650.55	ND	NR	39 - 129	NR	20	M6
Di-n-butylphthalate	ND	180000	28000	3650.55	ND	NR	42 - 122	NR	20	M6
Di-n-octylphthalate	ND	180000	34000	3650.55	ND	NR	30 - 147	NR	20	M6
Diethyl phthalate	ND	180000	32000	3650.55	ND	NR	28 - 139	NR	20	M6
Dimethyl phthalate	ND	180000	22000	3650.55	ND	NR	32 - 129	NR	20	M6
Surrogate: 1,2-Dichlorobenzene-d4	*4198*			*3650.55*		*115*	*23 - 102*			S4
Surrogate: 2,4,6-Tribromophenol	*0.000*			*5475.82*		*NR*	*3 - 138*			S4
Surrogate: 2-Chlorophenol-d4	*0.000*			*5475.82*		*NR*	*18 - 105*			S4
Surrogate: 2-Fluorobiphenyl	*0.000*			*3650.55*		*NR*	*34 - 106*			S4
Surrogate: 2-Fluorophenol	*0.000*			*5475.82*		*NR*	*16 - 94*			S4
Surrogate: 4-Terphenyl-d14	*0.000*			*3650.55*		*NR*	*31 - 130*			S4
Surrogate: Nitrobenzene-d5	*0.000*			*3650.55*		*NR*	*23 - 102*			S4
Surrogate: Phenol-d6	*0.000*			*5475.82*		*NR*	*14 - 104*			S4

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612		Reported :	01/21/2022

Semivolatile Organic Compounds by EPA 8270C - Quality Control

Analyte	Result (ug/kg wet)	PQL (ug/kg wet)	MDL (ug/kg wet)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B1L1579 - MSSEMI_NAL										
Blank (B1L1579-BLK1)						Prepared: 12/29/2021 Analyzed: 12/29/2021				
bis(2-ethylhexyl)phthalate	ND	330	63							
Butylbenzylphthalate	ND	330	41							
Di-n-butylphthalate	ND	330	51							
Di-n-octylphthalate	ND	330	63							
Diethyl phthalate	ND	330	58							
Dimethyl phthalate	ND	330	40							
Surrogate: 1,2-Dichlorobenzene-d4	*1769*			*3333.33*		*53.1*	*23 - 102*			
Surrogate: 2,4,6-Tribromophenol	*2532*			*5000.00*		*50.6*	*3 - 138*			
Surrogate: 2-Chlorophenol-d4	*2673*			*5000.00*		*53.5*	*18 - 105*			
Surrogate: 2-Fluorobiphenyl	*2094*			*3333.33*		*62.8*	*34 - 106*			
Surrogate: 2-Fluorophenol	*2573*			*5000.00*		*51.5*	*16 - 94*			
Surrogate: 4-Terphenyl-d14	*2304*			*3333.33*		*69.1*	*31 - 130*			
Surrogate: Nitrobenzene-d5	*1589*			*3333.33*		*47.7*	*23 - 102*			
Surrogate: Phenol-d6	*2610*			*5000.00*		*52.2*	*14 - 104*			
LCS (B1L1579-BS1)						Prepared: 12/29/2021 Analyzed: 12/29/2021				
bis(2-ethylhexyl)phthalate	2523.00	330	63	3333.33		75.7	49 - 123			
Butylbenzylphthalate	2484.33	330	41	3333.33		74.5	49 - 122			
Di-n-butylphthalate	2721.33	330	51	3333.33		81.6	48 - 118			
Di-n-octylphthalate	2522.67	330	63	3333.33		75.7	46 - 131			
Diethyl phthalate	2530.00	330	58	3333.33		75.9	50 - 115			
Dimethyl phthalate	2503.33	330	40	3333.33		75.1	48 - 112			
Surrogate: 1,2-Dichlorobenzene-d4	*1813*			*3333.33*		*54.4*	*23 - 102*			
Surrogate: 2,4,6-Tribromophenol	*3845*			*5000.00*		*76.9*	*3 - 138*			
Surrogate: 2-Chlorophenol-d4	*2807*			*5000.00*		*56.1*	*18 - 105*			
Surrogate: 2-Fluorobiphenyl	*2250*			*3333.33*		*67.5*	*34 - 106*			
Surrogate: 2-Fluorophenol	*2617*			*5000.00*		*52.3*	*16 - 94*			
Surrogate: 4-Terphenyl-d14	*2351*			*3333.33*		*70.5*	*31 - 130*			
Surrogate: Nitrobenzene-d5	*1906*			*3333.33*		*57.2*	*23 - 102*			
Surrogate: Phenol-d6	*2859*			*5000.00*		*57.2*	*14 - 104*			

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612		Reported :	01/21/2022

Notes and Definitions

S4	Surrogate was diluted out.
R	RPD value outside acceptance criteria. Calculation is based on raw values.
M6	Matrix spike analyte was diluted out.
H3	Initial analysis within holding time. Reanalysis was past holding time.
D1	Sample required dilution due to possible matrix interference.
ND	Analyte is not detected at or above the Practical Quantitation Limit (PQL). When client requests quantitation against MDL, analyte is not detected at or above the Method Detection Limit (MDL)
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
NR	Not Reported
RPD	Relative Percent Difference
CA2	CA-ELAP (CDPH)
OR1	OR-NELAP (OSPHL)

Notes:
(1) The reported MDL and PQL are based on prep ratio variation and analytical dilution.
(2) The suffix [2C] of specific analytes signifies that the reported result is taken from the instrument's second column.
(3) Results are wet unless otherwise specified.

GSI ENVIRONMENTAL

CHAIN-OF-CUSTODY RECORD
Date: 12/22/21
Page 1 of 1

2102631

3.6°C

FROM:
GSI Environmental Inc.
19200 Von Karman Ave, Suite 800
Irvine, CA 92612
(949) 679-1070

PROJECT NAME: SATI
PROJECT NO.: 6013
PROJECT CONTACT: Bianca Mintz
LAB CONTACT: Christine Caballero
GLOBAL ID:
SAMPLER(S): (PRINT) CJL

TEL: (949) 679-1070
E-MAIL: BGMintz@gsi-net.com; thwood@gsi-net.com

LABORATORY: Advanced Technology Laboratories

TURNAROUND TIME:
☐ SAME DAY ☐ 24 HR ☐ 48 HR
☐ 72 HR ☐ 5 DAYS ☒ STANDARD

SPECIAL INSTRUCTIONS: See Email for Method details

REQUESTED ANALYSES
Please check box or fill in blank as needed.

LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	Unpreserved	Preserved	Field Filtered	Metals	Cr6	PCBs	PAHs	~~Chlorinated Herbicides~~ TPH	Dioxins	phthalates	Polybromin(ated) Diphenyl	Particle Size
1	PT02-A	12/22/21	0830	Soil	6	X			X	X	X	X	X	X	X	X	X
2	Sample 4	12/22/21	11:00	Soil	3	X			X	X	X	X	X				
3	Sample 5	↓	8:20	Soil	6	X			X	X	X	X	X	X	X	X	X
4	Sample 6	↓	9:15	Soil	3	X			X	X	X	X	X				
5	Sample 7	↓	9 30	Soil	3	X			X	X	X	X	X				
6	Sample 8	↓	10 30	Soil	3	X			X	X	X	X	X				
7	Sample 9	↓	10 55	Soil	3	X			X	X	X	X	X				
8	Sample 10	↓	11 20	Soil	3	X			X	X	X	X	X				
9	Sample 11	↓	11:30	Soil	3	X			X	X	X	X	X				

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
[signature]	Thwoi 12/22/21 14:35	12/22/21	14 35
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:

Petroleum Services Division
3437 Landco Dr.
Bakersfield, California 93308
Tel: 661-325-5657
Fax: 661-325-5808
www.corelab.com

January 7, 2022

Jerald Ancheta
Advanced Technology Laboratories
3275 Walnut Ave
Signal Hill, CA 90755

Subject: Laser Particle Size Analysis
Project: 2102631
CL File No: 2200068

Dear Mr. Ancheta,

The attached file presents the final particle size determination results for the two soil samples submitted from your Project #2102631.

Appropriate ASTM, EPA or API methodologies were used for this project and SOP's are available on request. The sample for this project is currently in storage and will be retained for thirty days past completion of testing at no charge. At the end of thirty days, the sample will be disposed. You may contact me regarding continued storage, disposal, or return of the sample.

Thank you for this opportunity to be of service to Advanced Technology Laboratories Please do not hesitate to contact us at (661-325-5657) if you have any questions regarding these results or if we can be of any additional service.

Sincerely,
Core Laboratories LP

Chris Florence
Sr. Core Analyst

The analyses, opinions or interpretations contained in this report are based upon observations and material supplied by the client for whose exclusive and confidential use this report has been made. The interpretations or opinions expressed represent the best judgment of Core Laboratories. Core Laboratories assumes no responsibility and makes no warranty or representations, expressed or implied, as to the productivity, proper operations or profitableness, however, of any oil, gas, coal or other mineral, property, well or sand in connection with which such report is used or relied upon for any reason whatsoever.

SIEVE and LASER PARTICLE SIZE SUMMARY

(METHODOLOGY: ASTM D422/D4464M)

Petroleum Services

Company: Advanced Technology Laboratories
Project Number: 2102631

CL File No.: 2200068
Date: 1/7/2022

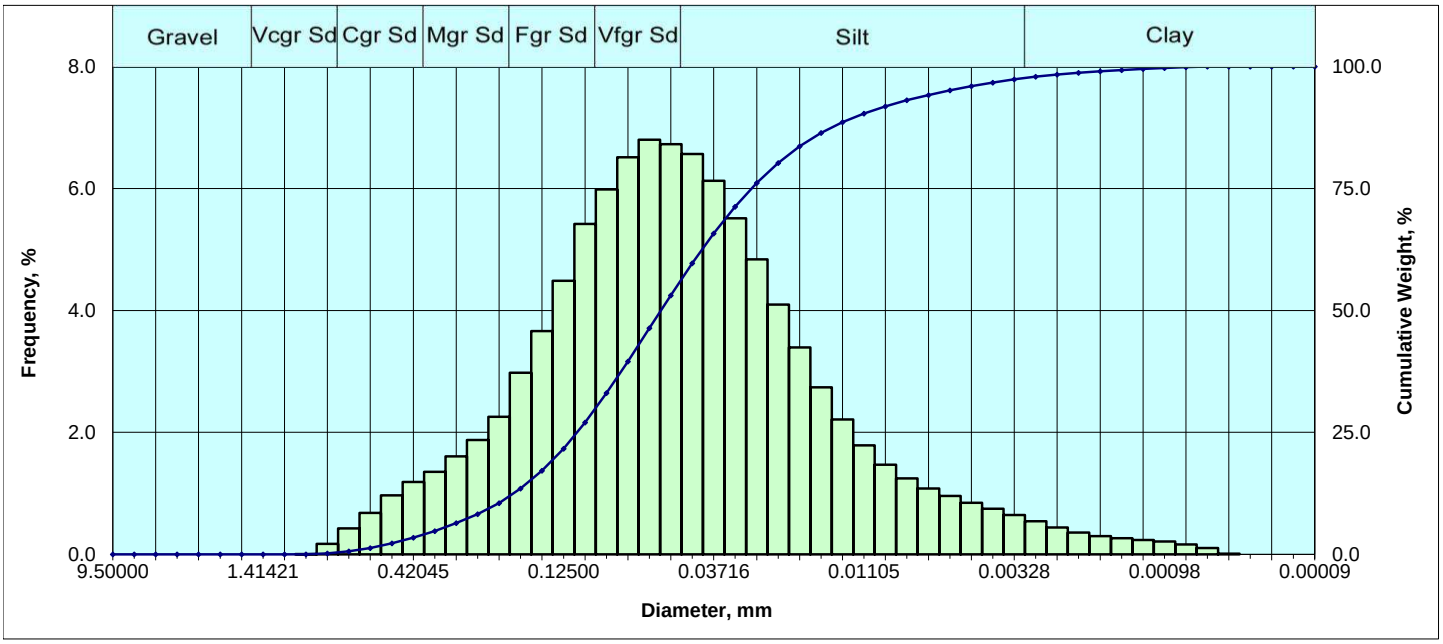
Sample ID	Grain Size Description** (Mean from Folk)	Median Grain Size, mm	Component Percentages								
			Gravel	Sand Size					Silt	Clay	Silt & Clay
				VCoarse	Coarse	Medium	Fine	VFine			
PT02-A	Silt	0.0571	0.00	0.00	2.24	6.02	13.38	24.72	50.36	3.28	53.63
Sample 5	Fine Grain Sand	0.1869	8.11	4.52	13.72	16.62	16.45	13.82	23.99	2.77	26.76

**Wentworth Scale

Company: Advanced Technology Laboratories
Project Number: 2102631

CL File No.: 2200068
Sample ID: PT02-A

Sieve and Laser Particle Size Analysis



Particle Size Distribution						
	Diameter				Weight %	
	[US Mesh]	[in.]	[mm]	[ϕ]	[Incl.]	[Cum.]
Gravel	3/8 in.	0.375000	9.50000	-3.25	0.000	0.00
	1/4 in.	0.250000	6.35000	-2.67	0.000	0.00
	4	0.187008	4.75000	-2.25	0.000	0.00
	6	0.131890	3.35000	-1.75	0.000	0.00
	8	0.092913	2.36000	-1.25	0.000	0.00
	10	0.078740	2.00000	-1.00	0.000	0.00
V Crse Sand	12	0.066212	1.68179	-0.75	0.000	0.00
	14	0.055678	1.41421	-0.50	0.000	0.00
	16	0.046819	1.18921	-0.25	0.000	0.00
	18	0.039370	1.00000	0.00	0.002	0.00
Coarse Sand	20	0.033106	0.84090	0.25	0.170	0.17
	25	0.027839	0.70711	0.50	0.426	0.60
	30	0.023410	0.59460	0.75	0.679	1.28
	35	0.019685	0.50000	1.00	0.970	2.25
Medium Sand	40	0.016553	0.42045	1.25	1.188	3.44
	45	0.013919	0.35355	1.50	1.352	4.79
	50	0.011705	0.29730	1.75	1.609	6.40
	60	0.009843	0.25000	2.00	1.874	8.27
Fine Sand	70	0.008277	0.21022	2.25	2.256	10.53
	80	0.006960	0.17678	2.50	2.978	13.51
	100	0.005852	0.14865	2.75	3.660	17.17
	120	0.004921	0.12500	3.00	4.487	21.65
V. Fine Sand	140	0.004138	0.10511	3.25	5.417	27.07
	170	0.003480	0.08839	3.50	5.986	33.06
	200	0.002926	0.07433	3.75	6.513	39.57
	230	0.002461	0.06250	4.00	6.799	46.37
Silt	270	0.002069	0.05256	4.25	6.728	53.10
	325	0.001740	0.04419	4.50	6.567	59.66
	400	0.001463	0.03716	4.75	6.127	65.79
	450	0.001230	0.03125	5.00	5.514	71.30
	500	0.001035	0.02628	5.25	4.840	76.14
	635	0.000870	0.02210	5.50	4.098	80.24
		0.000732	0.01858	5.75	3.391	83.63
		0.000615	0.01562	6.00	2.740	86.37
		0.000517	0.01314	6.25	2.212	88.59
		0.000435	0.01105	6.50	1.790	90.38
		0.000366	0.00929	6.75	1.472	91.85
		0.000308	0.00781	7.00	1.244	93.09
		0.000259	0.00657	7.25	1.081	94.17
		0.000217	0.00552	7.50	0.956	95.13
		0.000183	0.00465	7.75	0.847	95.98
		0.000154	0.00391	8.00	0.749	96.72
Clay		0.000129	0.00328	8.25	0.646	97.37
		0.000109	0.00276	8.50	0.543	97.91
		0.000091	0.00232	8.75	0.442	98.35
		0.000077	0.00195	9.00	0.359	98.71
		0.000065	0.00164	9.25	0.299	99.01
		0.000054	0.00138	9.50	0.263	99.28
		0.000046	0.00116	9.75	0.238	99.51
		0.000038	0.00098	10.00	0.210	99.72
		0.000032	0.00082	10.25	0.164	99.89
		0.000027	0.00069	10.50	0.102	99.99
		0.000023	0.00058	10.75	0.011	100.00
		0.000019	0.00049	11.00	0.000	100.00
		0.000016	0.00041	11.25	0.000	100.00
		0.000015	0.00038	11.50	0.000	100.00
		0.000003	0.00009	13.50	0.000	100.00

Sorting Statistics (Folk)			
Parameter	Trask	Inman	Folk
Median	Silt sized		
(in)	0.0022	0.0022	0.0022
(mm)	0.0571	0.0571	0.0571
Mean	Silt sized		
(in)	0.0028	0.0021	0.0022
(mm)	0.0701	0.0535	0.0547
Sorting	Poor		
	2.026	1.558	1.678
Skewness	Near symmetrical		
	0.974	0.236	0.092
Kurtosis	Lepokurtic		
	0.205	0.904	1.193

Component Percentages				
Gravel	Sand	Silt	Clay	Silt + Clay
0.00	46.37	50.36	3.28	53.63

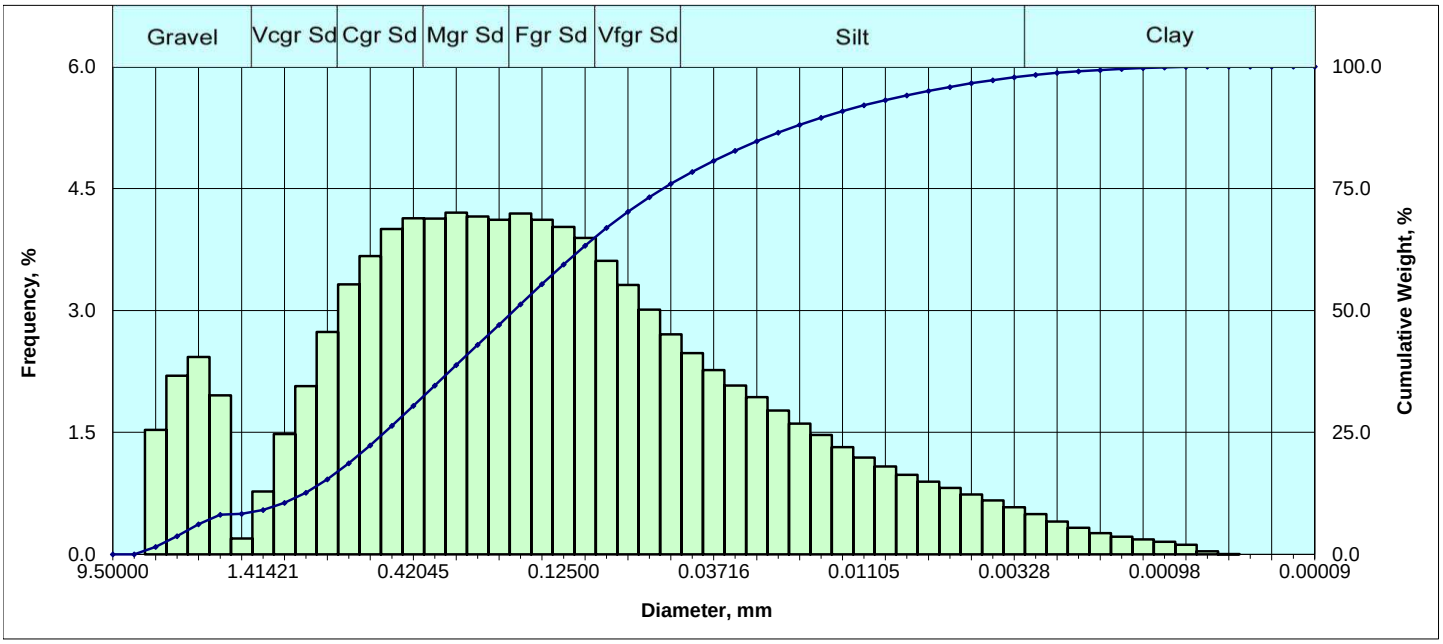
Percentile [Weight, %]	Particle Diameter [in.]	[mm]	[phi]
5	0.0136	0.3461	1.5307
10	0.0086	0.2195	2.1876
16	0.0062	0.1576	2.6656
25	0.0044	0.1127	3.1493
40	0.0029	0.0736	3.7646
50	0.0022	0.0571	4.1296
70	0.0013	0.0326	4.9369
75	0.0011	0.0275	5.1869
84	0.0007	0.0182	5.7811
90	0.0005	0.0115	6.4439
95	0.0002	0.0057	7.4638

**All Grain Sizes Classed Using Wentworth Scale

Company: Advanced Technology Laboratories
Project Number: 2102631

CL File No.: 2200068
Sample ID: Sample 5

Sieve and Laser Particle Size Analysis



	Particle Size Distribution					
	Diameter				Weight %	
	[US Mesh]	[in.]	[mm]	[ϕ]	[Incl.]	[Cum.]
Gravel	3/8 in.	0.375000	9.50000	-3.25	0.000	0.00
	1/4 in.	0.250000	6.35000	-2.67	0.000	0.00
	4	0.187008	4.75000	-2.25	1.533	1.53
	6	0.131890	3.35000	-1.75	2.197	3.73
	8	0.092913	2.36000	-1.25	2.427	6.16
	10	0.078740	2.00000	-1.00	1.954	8.11
V Crse Sand	12	0.066212	1.68179	-0.75	0.196	8.31
	14	0.055678	1.41421	-0.50	0.773	9.08
	16	0.046819	1.18921	-0.25	1.479	10.56
	18	0.039370	1.00000	0.00	2.069	12.63
Coarse Sand	20	0.033106	0.84090	0.25	2.735	15.36
	25	0.027839	0.70711	0.50	3.320	18.68
	30	0.023410	0.59460	0.75	3.669	22.35
	35	0.019685	0.50000	1.00	4.001	26.35
Medium Sand	40	0.016553	0.42045	1.25	4.132	30.48
	45	0.013919	0.35355	1.50	4.128	34.61
	50	0.011705	0.29730	1.75	4.202	38.81
	60	0.009843	0.25000	2.00	4.156	42.97
Fine Sand	70	0.008277	0.21022	2.25	4.114	47.08
	80	0.006960	0.17678	2.50	4.190	51.27
	100	0.005852	0.14865	2.75	4.117	55.39
	120	0.004921	0.12500	3.00	4.026	59.42
V. Fine Sand	140	0.004138	0.10511	3.25	3.891	63.31
	170	0.003480	0.08839	3.50	3.609	66.92
	200	0.002926	0.07433	3.75	3.314	70.23
	230	0.002461	0.06250	4.00	3.009	73.24
Silt	270	0.002069	0.05256	4.25	2.708	75.95
	325	0.001740	0.04419	4.50	2.476	78.42
	400	0.001463	0.03716	4.75	2.267	80.69
	450	0.001230	0.03125	5.00	2.076	82.77
	500	0.001035	0.02628	5.25	1.933	84.70
	635	0.000870	0.02210	5.50	1.767	86.47
		0.000732	0.01858	5.75	1.607	88.07
		0.000615	0.01562	6.00	1.470	89.54
		0.000517	0.01314	6.25	1.320	90.86
		0.000435	0.01105	6.50	1.190	92.05
		0.000366	0.00929	6.75	1.081	93.14
		0.000308	0.00781	7.00	0.977	94.11
		0.000259	0.00657	7.25	0.894	95.01
		0.000217	0.00552	7.50	0.818	95.82
		0.000183	0.00465	7.75	0.738	96.56
		0.000154	0.00391	8.00	0.664	97.23
Clay		0.000129	0.00328	8.25	0.580	97.81
		0.000109	0.00276	8.50	0.493	98.30
		0.000091	0.00232	8.75	0.405	98.70
		0.000077	0.00195	9.00	0.325	99.03
		0.000065	0.00164	9.25	0.262	99.29
		0.000054	0.00138	9.50	0.216	99.51
		0.000046	0.00116	9.75	0.183	99.69
		0.000038	0.00098	10.00	0.154	99.84
		0.000032	0.00082	10.25	0.119	99.96
		0.000027	0.00069	10.50	0.038	100.00
		0.000023	0.00058	10.75	0.000	100.00
		0.000019	0.00049	11.00	0.000	100.00
		0.000016	0.00041	11.25	0.000	100.00
		0.000015	0.00038	11.50	0.000	100.00
		0.000003	0.00009	13.50	0.000	100.00

Sorting Statistics (Folk)			
Parameter	Trask	Inman	Folk
Median	Fine sand sized		
(in)	0.0074	0.0074	0.0074
(mm)	0.1869	0.1869	0.1869
Mean	Fine sand sized		
(in)	0.0116	0.0060	0.0064
(mm)	0.2940	0.1513	0.1623
Sorting	Very poor		
	3.081	2.430	2.541
Skewness	Finely skewed		
	0.924	0.187	0.115
Kurtosis	Mesokurtic		
	0.189	0.801	1.104

Component Percentages				
Gravel	Sand	Silt	Clay	Silt + Clay
8.11	65.13	23.99	2.77	26.76

Percentile [Weight, %]	Particle Diameter [in.]	[mm]	[phi]
5	0.1115	2.8316	-1.5016
10	0.0502	1.2740	-0.3494
16	0.0321	0.8152	0.2948
25	0.0209	0.5319	0.9107
40	0.0112	0.2838	1.8171
50	0.0074	0.1869	2.4193
70	0.0030	0.0753	3.7311
75	0.0022	0.0560	4.1575
84	0.0011	0.0281	5.1544
90	0.0006	0.0148	6.0816
95	0.0003	0.0066	7.2483

**All Grain Sizes Classed Using Wentworth Scale

ADVANCED TECHNOLOGY LABORATORIES

SUBCONTRACT ORDER

Work Order: 2102631

SENDING LABORATORY:

Advanced Technology Laboratories
3275 Walnut Avenue
Signal Hill, CA 90755
Phone: 562.989.4045
Fax: 562.989.6348
Project Manager: Jerald Ancheta
(Jerald.Ancheta@atlglobal.com)
Sampler: _Client Sampler

RECEIVING LABORATORY:

Core Laboratories LP
3437 Landco Dr.
Bakersfield, CA 93308
Phone :(661) 325-5657
Fax:
PO#: SC16027_FASTEST TAT POSSIBLE

IMPORTANT : Please include Work Order # and PO # in your invoice.

QC Requirements:

- [x] Routine
- [ ] Caltrans
- [ ] Legal
- [ ] RWQCB
- [ ] Level IV*
- [ ] Other: _____

* All Level IV sample containers (including empty ones) must be returned to ATL 30 days after receipt.

EDD Requirements:

- [x] Standard Excel
- [ ] Geotracker EDF
- [ ] Other:

Analysis	Due	Expires	Sampled	Comments
ATL Lab#: 2102631-01 / PT02-A Particle_Size_SUB [Particle Size by Sieve & Laser Methods]	**12/28/21 14:00**	**Soil** 01/05/22 08:30	**12/22/21 08:30** Glass Jar - 8 oz b	
ATL Lab#: 2102631-03 / Sample 5 Particle_Size_SUB [Particle Size by Sieve & Laser Methods]	**12/28/21 14:00**	**Soil** 01/05/22 08:20	**12/22/21 08:20** Glass Jar - 8 oz b	

Prepared by: 12/30/21
Sample Control Technician — Date

Inspected by: 12/30/21
PM Lead — Date

Approved by: 12/30/21
Dedicated ATL Project Manager — Date

	Date	Time		Date	Time
Released By ATL Sample Control	12/30/21	~~18:00~~ 17:05	Received By Courier	12/30/21	~~18:00~~ 17:05
Released By Courier	12/30/21	18:00	Received By Subcontract Laboratory	12/30/21	18:00
Released By	Date	Time	Received By	12-31-21	

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CERES Analytical Laboratory, Inc.
4919 Windplay Dr. Suite 1, El Dorado Hills, CA 95762

January 12, 2022 Ceres ID: 14924

Advanced Technology Laboratories
3275 Walnut Avenue
Signal Hill, CA 90755

The following report contains the results for the one aqueous sample received on December 31, 2021. This sample was analyzed for tetra through octa chlorinated dioxins and dibenzofurans by EPA method 8290. Routine turn-around time was provided for this work.

Sample results are reported on a dry weight basis.

This work was authorized under Advanced Technology Laboratories' Work Order # 2102631 and P.O. # SC16028.

Continuing Calibration Verification (CCV) Requirements
All associated calibration verification standard(s) (CCV) met the acceptance criteria.

The report consists of a Cover Letter, Sample Inventory (Section I), Data Summary (Section II), Sample Tracking (Section VI), and Qualifiers/Abbreviations (Section VII). Raw Data (Section III), Continuing Calibration (Section IV), and Initial Calibration (Section V) are available in a full report (.pdf format) upon request.

If you have any questions regarding this report, please feel free to contact me at (916)932-5011.

Sincerely,

James M. Hedin
Director of Operations/CEO
jhedin@ceres-lab.com

Section I: Sample Inventory

Ceres Sample ID:	Sample ID	Date Received	Collection Date	&Time
14924-001	PT02-A 2102631-01	12/31/2021	12/22/2021	8:30
14924-002	Sample 5 2102631-03	12/31/2021	12/22/2021	8:20

Section II: Data Summary

CERES Analytical Laboratory, Inc.
4919 Windplay Dr.Suite 1, El Dorado Hills, CA 95762

EPA Method 8290A

Quality Assurance Sample Method Blank		Date Received: NA
	QC Batch #: 2550	Date Extracted: 1/3/2022
	Matrix: Soil	Date Analyzed: 1/12/2022
Project ID: 2102631	Sample Size: 10.00 g	

Analyte	Conc. (pg/g)	MDL	RL	Qual.	Labeled Standards	% R	LCL-UCL (a)	Qualifiers
2,3,7,8-TCDD	DL= 0.290	0.172	0.500		13C-2378-TCDD	95.6	40-135	
12378-PeCDD	DL= 0.408	0.327	2.50		13C-12378-PeCDD	106	40-135	
123478-HxCDD	DL= 0.680	0.327	2.50		13C-123478-HxCDD	86.9	40-135	
123678-HxCDD	DL= 0.561	0.655	2.50		13C-123678-HxCDD	96.9	40-135	
123789-HxCDD	DL= 0.535	0.315	2.50		13C-1234678-HpCDD	84.5	40-135	
1234678-HpCDD	DL= 0.698	0.409	2.50		13C-OCDD	72.4	40-135	
OCDD	DL= 1.06	1.01	5.00		13C-2378-TCDF	79.4	40-135	
2,3,7,8-TCDF	DL= 0.293	0.0886	0.500		13C-12378-PeCDF	86.7	40-135	
12378-PeCDF	DL= 0.460	0.412	2.50		13C-23478-PeCDF	87.9	40-135	
23478-PeCDF	DL= 0.450	0.422	2.50		13C-123478-HxCDF	91.4	40-135	
123478-HxCDF	DL= 0.477	0.518	2.50		13C-123678-HxCDF	97.5	40-135	
123678-HxCDF	DL= 0.443	0.533	2.50		13C-234678-HxCDF	88.6	40-135	
234678-HxCDF	DL= 0.432	0.319	2.50		13C-123789-HxCDF	91.1	40-135	
123789-HxCDF	DL= 0.386	0.425	2.50		13C-1234678-HpCDF	83.1	40-135	
1234678-HpCDF	DL= 0.323	0.279	2.50		13C-1234789-HpCDF	70.7	40-135	
1234789-HpCDF	DL= 0.438	0.378	2.50					
OCDF	DL= 0.600	0.461	5.00					

Totals	Conc. (pg/g)	EMPC
Total TCDD	DL= 0.290	
Total PeCDD	DL= 0.480	
Total HxCDD	DL= 0.680	
Total HpCDD	DL= 0.698	
Total TCDF	DL= 0.293	
Total PeCDF	DL= 0.460	
Total HxCDF	DL= 0.477	
Total HpCDF	DL= 0.438	

CRS		
37Cl4-2378-TCDD	81.3	40-135

DL - Signifies Non-Detect (ND<) sample specific detection limit.
EMPC - Estimated Maximum Possible Concentration due to ion abundance ratio failure.
(a) - Lower control limit - Upper control limit
(b) - TEQ based on (2005) World Health Organization (WHO) Toxic Equivalent Factors.

Total Toxic Equivalency (TEQ min.) (b)**:** 0.0 pg/g

Analyst: JMH **Reviewed by: BS**

CERES Analytical Laboratory, Inc.
4919 Windplay Dr.Suite 1, El Dorado Hills, CA 95762

EPA Method 8290A

Quality Assurance Samples Laboratory Control Samples		Date Received: NA
	QC Batch #: 2550	Date Extracted: 1/3/2022
	Matrix: Soil	Date Analyzed: 1/12/2022
Project ID: 2102631	Sample Size: 10.00 g	

Analyte	LCS1 % Rec.	LCS2 % Rec.	%RSD	Labeled Standards	LCS1 % Rec.	LCS2 % Rec	Limits (a)
2,3,7,8-TCDD	87.4	78.3	7.77	13C-2378-TCDD	92.9	85.6	40-135
12378-PeCDD	97.6	96.6	0.728	13C-12378-PeCDD	108	90.8	40-135
123478-HxCDD	119	113	3.66	13C-123478-HxCDD	67.8	77.6	40-135
123678-HxCDD	107	120	8.10	13C-123678-HxCDD	85.1	80.3	40-135
123789-HxCDD	93.4	104	7.59	13C-1234678-HpCDD	80.0	71.3	40-135
1234678-HpCDD	104	106	1.35	13C-OCDD	69.3	59.6	40-135
OCDD	100	102	1.40	13C-2378-TCDF	79.3	75.7	40-135
2,3,7,8-TCDF	102	92.1	7.21	13C-12378-PeCDF	92.1	76.9	40-135
12378-PeCDF	94.6	94	0.450	13C-23478-PeCDF	93.6	77.9	40-135
23478-PeCDF	99.4	99.2	0.142	13C-123478-HxCDF	75.7	86.1	40-135
123478-HxCDF	100	104	2.77	13C-123678-HxCDF	75.3	82.6	40-135
123678-HxCDF	98.8	110	7.59	13C-234678-HxCDF	71.2	81.2	40-135
234678-HxCDF	108	106	1.32	13C-123789-HxCDF	74.8	78.1	40-135
123789-HxCDF	103	109	4.00	13C-1234678-HpCDF	75.2	71.2	40-135
1234678-HpCDF	106	103	2.03	13C-1234789-HpCDF	69.4	60.3	40-135
1234789-HpCDF	97.8	102	2.97				
OCDF	107	105	1.33				
				CRS			
				37Cl4-2378-TCDD	85.6	83.5	40-135

(a) Limits based on method acceptance criteria.

Analyst: JMH **Reviewed by: BS**

CERES Analytical Laboratory, Inc.
4919 Windplay Dr.Suite 1, El Dorado Hills, CA 95762

EPA Method 8290A

Client Sample ID: PT02-A / 2102631-01					
Project ID:	2102631	**Ceres Sample ID:**	14924-001	**Date Received:**	12/31/2021
		QC Batch #:	2550	**Date Extracted:**	1/3/2022
Date Collected:	12/22/2021	**Matrix:**	Soil	**Date Analyzed:**	1/12/2022
Time Collected:	8:30	**Sample Size:**	14.75 g **% Solids:** 67.3		

Analyte	Conc. (pg/g)	MDL	RL	Qual.
2,3,7,8-TCDD	1.65	0.172	0.504	
12378-PeCDD	18.5	0.327	2.52	
123478-HxCDD	19.2	0.327	2.52	
123678-HxCDD	63.2	0.655	2.52	
123789-HxCDD	41.8	0.315	2.52	
1234678-HpCDD	1,390	0.409	2.52	
OCDD	10,300	1.01	5.04	E
2,3,7,8-TCDF	48.2	0.0886	0.504	
12378-PeCDF	70.9	0.412	2.52	
23478-PeCDF	51.7	0.422	2.52	
123478-HxCDF	67.7	0.518	2.52	
123678-HxCDF	99.3	0.533	2.52	
234678-HxCDF	116	0.319	2.52	
123789-HxCDF	44.1	0.425	2.52	
1234678-HpCDF	430	0.279	2.52	
1234789-HpCDF	72.0	0.378	2.52	
OCDF	693	0.461	5.04	

Totals	Conc. (pg/g)	EMPC
Total TCDD	50.6	
Total PeCDD	160	
Total HxCDD	666	
Total HpCDD	2,950	
Total TCDF	874	
Total PeCDF	1,570	
Total HxCDF	436	
Total HpCDF	906	

Labeled Standards	% R	LCL-UCL (a)	Qualifiers
13C-2378-TCDD	99.1	40-135	
13C-12378-PeCDD	106	40-135	
13C-123478-HxCDD	96.2	40-135	
13C-123678-HxCDD	95.3	40-135	
13C-1234678-HpCDD	80.1	40-135	
13C-OCDD	59.6	40-135	
13C-2378-TCDF	80.1	40-135	
13C-12378-PeCDF	88.0	40-135	
13C-23478-PeCDF	91.7	40-135	
13C-123478-HxCDF	98.9	40-135	
13C-123678-HxCDF	97.0	40-135	
13C-234678-HxCDF	94.0	40-135	
13C-123789-HxCDF	92.1	40-135	
13C-1234678-HpCDF	75.1	40-135	
13C-1234789-HpCDF	74.1	40-135	

CRS

37Cl4-2378-TCDD	92.5	40-135

DL - Signifies Non-Detect (ND<) sample specific detection limit.
EMPC - Estimated Maximum Possible Concentration due to ion abundance ratio failure.
(a) - Lower control limit - Upper control limit
(b) - TEQ based on (2005) World Health Organization (WHO) Toxic Equivalent Factors.

Total Toxic Equivalency (TEQ min.) (b)**:** 110 pg/g

Analyst: JMH **Reviewed by: BS**

CERES Analytical Laboratory, Inc.
4919 Windplay Dr.Suite 1, El Dorado Hills, CA 95762

EPA Method 8290A

Client Sample ID: Sample 5 / 2102631-03					
Project ID:	2102631	**Ceres Sample ID:**	14924-002	**Date Received:**	12/31/2021
		QC Batch #:	2550	**Date Extracted:**	1/3/2022
Date Collected:	12/22/2021	**Matrix:**	Soil	**Date Analyzed:**	1/12/2022
Time Collected:	8:20	**Sample Size:**	11.66 g **% Solids:** 86.6		

Analyte	Conc. (pg/g)	MDL	RL	Qual.
2,3,7,8-TCDD	0.511	0.172	0.495	
12378-PeCDD	5.96	0.327	2.48	
123478-HxCDD	12.4	0.327	2.48	
123678-HxCDD	34.0	0.655	2.48	
123789-HxCDD	16.4	0.315	2.48	
1234678-HpCDD	1,730	0.409	2.48	
OCDD	8,840	1.01	4.95	E
2,3,7,8-TCDF	4.44	0.0886	0.495	
12378-PeCDF	4.08	0.412	2.48	
23478-PeCDF	4.84	0.422	2.48	
123478-HxCDF	8.12	0.518	2.48	
123678-HxCDF	6.62	0.533	2.48	
234678-HxCDF	9.05	0.319	2.48	
123789-HxCDF	4.02	0.425	2.48	
1234678-HpCDF	84.6	0.279	2.48	
1234789-HpCDF	4.41	0.378	2.48	
OCDF	193	0.461	4.95	

Totals	Conc. (pg/g)	EMPC
Total TCDD	6.99	
Total PeCDD	64.2	
Total HxCDD	1,200	
Total HpCDD	9,340	
Total TCDF	70.1	
Total PeCDF	114	
Total HxCDF	188	
Total HpCDF	230	

Labeled Standards	% R	LCL-UCL (a)	Qualifiers
13C-2378-TCDD	104	40-135	
13C-12378-PeCDD	110	40-135	
13C-123478-HxCDD	89.4	40-135	
13C-123678-HxCDD	94.5	40-135	
13C-1234678-HpCDD	76.5	40-135	
13C-OCDD	56.8	40-135	
13C-2378-TCDF	81.8	40-135	
13C-12378-PeCDF	93.4	40-135	
13C-23478-PeCDF	91.8	40-135	
13C-123478-HxCDF	95.3	40-135	
13C-123678-HxCDF	92.8	40-135	
13C-234678-HxCDF	86.0	40-135	
13C-123789-HxCDF	91.4	40-135	
13C-1234678-HpCDF	69.4	40-135	
13C-1234789-HpCDF	69.9	40-135	
CRS			
37Cl4-2378-TCDD	83.1	40-135	

DL - Signifies Non-Detect (ND<) sample specific detection limit.
EMPC - Estimated Maximum Possible Concentration due to ion abundance ratio failure.
(a) - Lower control limit - Upper control limit
(b) - TEQ based on (2005) World Health Organization (WHO) Toxic Equivalent Factors.

Total Toxic Equivalency (TEQ min.) (b)**:** 38.5 pg/g

Analyst: JMH **Reviewed by: BS**

Section VI: Sample Tracking

ADVANCED TECHNOLOGY LABORATORIES

SUBCONTRACT ORDER

Work Order: 2102631

SENDING LABORATORY:

Advanced Technology Laboratories
3275 Walnut Avenue
Signal Hill, CA 90755
Phone: 562.989.4045
Fax: 562.989.6348
Project Manager: Jerald Ancheta
(Jerald.Ancheta@atlglobal.com)
Sampler: _Client Sampler

RECEIVING LABORATORY:

Ceres Analytical Laboratory, Inc.
4919 Windplay Dr., Suite 1
El Dorado Hills, CA 95762
Phone :(916) 932-5011
Fax: (888) 932-5011
PO#: SC16028_FASTEST TAT POSSIBLE

IMPORTANT : Please include Work Order # and PO # in your invoice.

QC Requirements:

- [x] Routine
- [ ] RWQCB
- [ ] Caltrans
- [ ] Level IV*
- [ ] Legal
- [ ] Other: _____

* All Level IV sample containers (including empty ones) must be returned to ATL 30 days after receipt.

EDD Requirements:

- [x] Standard Excel
- [ ] Geotracker EDF
- [ ] Other:

Analysis	Due	Expires	Sampled	Comments
ATL Lab#: 2102631-01 / PT02-A		**Soil**	**12/22/21 08:30**	
8290_Dioxins_Dibenzofurans_SUB	**12/28/21 14:00**	01/21/22 08:30	Glass Jar - 8 oz c	
[Dioxins and Dibenzofurans]				
ATL Lab#: 2102631-03 / Sample 5		**Soil**	**12/22/21 08:20**	
8290_Dioxins_Dibenzofurans_SUB	**12/28/21 14:00**	01/21/22 08:20	Glass Jar - 8 oz c	
[Dioxins and Dibenzofurans]				

Prepared by: 12/30/21
Sample Control Technician — Date

Inspected by: 12/30/21
PM Lead — Date

Approved by: 12/30/21
Dedicated ATL Project Manager — Date

12/30/21

Released By ATL Sample Control	Date: 12/30/21	Time: 17:04	Received By Courier	Date: 12/30/21	Time: 17:04
Released By Courier	Date: 12/30/21	Time: 18:00	Received By Subcontract Laboratory	Date: 12/30/21	Time: 18:00
Released By	Date	Time	Received By	Date: 12/31/21	Time: 1405

C:\PROGRAM FILES (X86)\PROMIUM\ELEMENT\PRINT\SCO_ATL(A.9).RPT

Sample Receipt Check List Logged by: [illegible] (initials)

Ceres ID: 14924	Date/Time: 12/31/21 1405
Client Project ID: 2102631	Received Temp: 5.5 °C Acceptable: Y / N
Chain of Custody Relinquished by signed?	Y / N
Chain of Custody Received by signed?	Y / N
Custody Seals? Present?	Y / N
Intact?	Y / N
NA:	NA
Unlabeled / Illegible Samples	Y / N
Proper Containers:	Y / N
Preservation Acceptable (Chemical or Temperature)?	Y / N
Drinking Water, Sodium Thiosulfate present?	Y / N / NA
Residual Cl?	Y / N
Aqueous sample pH: NA	

List COC discrepancies:

[illegible] 12/31/21

List Damaged Samples:

[illegible] 12/31/21

Section VII: Qualifiers/Abbreviations

J	Concentration found below the lower quantitation limit but greater than zero.
B	Analyte present in the associated Method Blank.
E	Concentration found exceeds the Calibration range of the HRGC/HRMS.
D	This analyte concentration was calculated from a dilution.
X	The concentration found is the estimated maximum possible concentration due to chlorinated diphenyl ethers present in the sample.
H	Recovery limits exceeded. See cover letter.
*****	Results taken from dilution.
I	Interference. See cover letter.
Conc.	Concentration Found
DL	Calculated Detection Limit
ND	Non-Detect
% Rec.	Percent Recovery

WECK LABORATORIES, INC.

Certificate of Analysis

FINAL REPORT

Work Orders: 2A03041

Project: 2102631

Attn: Advanced Technology Labs

Client: Advanced Technology Laboratories
3275 Walnut Street
Signal Hill, CA 90755

Report Date: 1/21/2022

Received Date: 1/3/2022

Turnaround Time: Normal

Phones: (562) 989-4045

Fax: (562) 989-4040

P.O. #:

Billing Code:

ELAP-CA #1132 • EPA-UCMR #CA00211 • Guam-EPA #17-008R • HW-DOH #4047 • LACSD #10143 • NELAP-OR #4047 • NJ-DEP #CA015 • NV-DEP #NAC 445A • SCAQMD #93LA1006

This is a complete final report. The information in this report applies to the samples analyzed in accordance with the chain-of-custody document. Weck Laboratories certifies that the test results meet all requirements of TNI unless noted by qualifiers or written in the Case Narrative. This analytical report must be reproduced in its entirety.

Dear Advanced Technology Labs,

Enclosed are the results of analyses for samples received 1/03/22 with the Chain-of-Custody document. The samples were received in good condition, at 3.4 °C and on ice. All analyses met the method criteria except as noted in the case narrative or in the report with data qualifiers.

Reviewed by:

Rahul R. Nair
Project Manager

14859 Clark Avenue,City of Industry CA, 91745 | Phone: (626) 336-2139 | Fax: (626) 336-2634
www.wecklabs.com

Advanced Technology Laboratories
3275 Walnut Street
Signal Hill, CA 90755

Project Number: 2102631

Project Manager: Advanced Technology Labs

Reported:
01/21/2022 13:24

Sample Summary

Sample Name	Sampled By	Lab ID	Matrix	Sampled	Qualifiers
2102631-01/PT02-A	Client	2A03041-01	Solid	12/22/21 08:30	
2102631-03/Sample 5	Client	2A03041-02	Solid	12/22/21 08:20	

Analyses Accreditation Summary

Analyte	CAS #	Not By NELAP	ANAB ISO 17025
GC/MS SIM in Solid			
PBDE-47	5436-43-1	✓	
PBDE-99	60348-60-9	✓	
PBDE-100	189084-64-8	✓	
PBDE-153	68631-49-2	✓	
PBDE-154	207122-15-4	✓	
Perylene-d12	1520-96-3	✓	
Triphenyl phosphate	115-86-6	✓	

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Advanced Technology Laboratories
3275 Walnut Street
Signal Hill, CA 90755

Project Number: 2102631

Project Manager: Advanced Technology Labs

Reported: 01/21/2022 13:24

Sample Results

Sample: 2102631-01/PT02-A
2A03041-01 (Solid)

Sampled: 12/22/21 8:30 by Client

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
PPCPs - Polybrominated Diphenyl Ethers by GC/MS SIM						
Method: GC/MS SIM		**Instr:** GCMS06				
Batch ID: W2A0157 **Preparation:** EPA 3550/Sonication		**Prepared:** 01/04/22 12:55				**Analyst:** rmr
PBDE-100	**850**	110	ug/kg	5	01/19/22	M-02, M-04
PBDE-138	ND	110	ug/kg	5	01/19/22	M-02, M-04
PBDE-153	**140**	110	ug/kg	5	01/19/22	M-02, M-04
PBDE-154	ND	110	ug/kg	5	01/19/22	M-02, M-04
PBDE-17	ND	110	ug/kg	5	01/19/22	M-02, M-04
PBDE-28	ND	110	ug/kg	5	01/19/22	M-02, M-04
PBDE-47	**490**	110	ug/kg	5	01/19/22	M-02, M-04
PBDE-49	ND	110	ug/kg	5	01/19/22	M-02, M-04
PBDE-85	ND	110	ug/kg	5	01/19/22	M-02, M-04
PBDE-99	**160**	110	ug/kg	5	01/19/22	M-02, M-04
Surrogate(s)						
Perylene-d12	*37%*	*Conc: 41.3*	*50-150*		*01/19/22*	*S-04*
Triphenyl phosphate	*256%*	*Conc: 287*	*50-150*		*01/19/22*	*S-04*

Sample Results

Sample: 2102631-03/Sample 5
2A03041-02 (Solid)

Sampled: 12/22/21 8:20 by Client

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
PPCPs - Polybrominated Diphenyl Ethers by GC/MS SIM						
Method: GC/MS SIM		**Instr:** GCMS06				
Batch ID: W2A0157 **Preparation:** EPA 3550/Sonication		**Prepared:** 01/04/22 12:55				**Analyst:** rmr
PBDE-100	ND	100	ug/kg	5	01/19/22	M-02, M-04
PBDE-138	ND	100	ug/kg	5	01/19/22	M-02, M-04
PBDE-153	ND	100	ug/kg	5	01/19/22	M-02, M-04
PBDE-154	ND	100	ug/kg	5	01/19/22	M-02, M-04
PBDE-17	ND	100	ug/kg	5	01/19/22	M-02, M-04
PBDE-28	ND	100	ug/kg	5	01/19/22	M-02, M-04
PBDE-47	ND	100	ug/kg	5	01/19/22	M-02, M-04
PBDE-49	ND	100	ug/kg	5	01/19/22	M-02, M-04
PBDE-85	ND	100	ug/kg	5	01/19/22	M-02, M-04
PBDE-99	ND	100	ug/kg	5	01/19/22	M-02, M-04
Surrogate(s)						
Perylene-d12	*90%*	*Conc: 90.7*	*50-150*		*01/19/22*	
Triphenyl phosphate	*131%*	*Conc: 132*	*50-150*		*01/19/22*	

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www.wecklabs.com

Advanced Technology Laboratories
3275 Walnut Street
Signal Hill, CA 90755

Project Number: 2102631

Project Manager: Advanced Technology Labs

Reported: 01/21/2022 13:24

Quality Control Results

PPCPs - Polybrominated Diphenyl Ethers by GC/MS SIM

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W2A0157 - GC/MS SIM										
Blank (W2A0157-BLK1)				**Prepared: 01/04/22 Analyzed: 01/19/22**						
PBDE-100	ND	2.5	ug/kg							
PBDE-138	ND	2.5	ug/kg							
PBDE-153	ND	2.5	ug/kg							
PBDE-154	ND	2.5	ug/kg							
PBDE-17	ND	2.5	ug/kg							
PBDE-28	ND	2.5	ug/kg							
PBDE-47	ND	2.5	ug/kg							
PBDE-49	ND	2.5	ug/kg							
PBDE-85	ND	2.5	ug/kg							
PBDE-99	ND	2.5	ug/kg							
Surrogate(s)										
Perylene-d12	*13.6*		*ug/kg*	*12.5*		*109*	*50-150*			
Triphenyl phosphate	*14.0*		*ug/kg*	*12.5*		*112*	*50-150*			
LCS (W2A0157-BS1)				**Prepared: 01/04/22 Analyzed: 01/19/22**						
PBDE-100	3.12	2.5	ug/kg	2.50		125	50-150			
PBDE-138	2.52	2.5	ug/kg	2.50		101	50-150			
PBDE-153	2.58	2.5	ug/kg	2.50		103	50-150			
PBDE-154	2.58	2.5	ug/kg	2.50		103	50-150			
PBDE-17	2.66	2.5	ug/kg	2.50		106	50-150			
PBDE-28	2.61	2.5	ug/kg	2.50		105	50-150			
PBDE-47	2.72	2.5	ug/kg	2.50		109	50-150			
PBDE-49	2.73	2.5	ug/kg	2.50		109	50-150			
PBDE-85	2.39	2.5	ug/kg	2.50		96	50-150			
PBDE-99	3.03	2.5	ug/kg	2.50		121	50-150			
Surrogate(s)										
Perylene-d12	*14.7*		*ug/kg*	*12.5*		*118*	*50-150*			
Triphenyl phosphate	*15.0*		*ug/kg*	*12.5*		*120*	*50-150*			
Matrix Spike (W2A0157-MS1)	**Source: 2A03041-02**			**Prepared: 01/04/22 Analyzed: 01/19/22**						
PBDE-100	83.1	100	ug/kg	20.9	62.3	99	50-150			M-02, M-04
PBDE-138	20.4	100	ug/kg	20.9	ND	97	50-150			M-02, M-04
PBDE-153	26.9	100	ug/kg	20.9	6.86	96	50-150			M-02, M-04
PBDE-154	25.8	100	ug/kg	20.9	4.94	100	50-150			M-02, M-04
PBDE-17	17.6	100	ug/kg	20.9	ND	84	50-150			M-02, M-04
PBDE-28	18.5	100	ug/kg	20.9	0.688	85	50-150			M-02, M-04
PBDE-47	58.6	100	ug/kg	20.9	42.2	78	50-150			M-02, M-04
PBDE-49	20.2	100	ug/kg	20.9	1.52	89	50-150			M-02, M-04
PBDE-85	23.2	100	ug/kg	20.9	3.90	92	50-150			M-02, M-04
PBDE-99	33.7	100	ug/kg	20.9	13.6	96	50-150			M-02, M-04
Surrogate(s)										
Perylene-d12	*105*		*ug/kg*	*105*		*100*	*50-150*			

Advanced Technology Laboratories
3275 Walnut Street
Signal Hill, CA 90755

Project Number: 2102631

Project Manager: Advanced Technology Labs

Reported:
01/21/2022 13:24

Quality Control Results

(Continued)

PPCPs - Polybrominated Diphenyl Ethers by GC/MS SIM (Continued)

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W2A0157 - GC/MS SIM (Continued)										
Matrix Spike (W2A0157-MS1)	**Source: 2A03041-02**			**Prepared: 01/04/22**	**Analyzed: 01/19/22**					
Surrogate(s)										
Triphenyl phosphate	*140*		*ug/kg*	*105*		*134*	*50-150*			
Matrix Spike Dup (W2A0157-MSD1)	**Source: 2A03041-02**			**Prepared: 01/04/22**	**Analyzed: 01/19/22**					
PBDE-100	72.1	110	ug/kg	21.5	62.3	46	50-150	200	30	M-02, M-04, MS-01, R-03
PBDE-138	17.0	110	ug/kg	21.5	ND	79	50-150	200	30	M-02, M-04, R-03
PBDE-153	23.0	110	ug/kg	21.5	6.86	75	50-150	200	30	M-02, M-04, R-03
PBDE-154	22.6	110	ug/kg	21.5	4.94	82	50-150	200	30	M-02, M-04, R-03
PBDE-17	17.7	110	ug/kg	21.5	ND	82	50-150	200	30	M-02, M-04, R-03
PBDE-28	17.8	110	ug/kg	21.5	0.688	80	50-150	200	30	M-02, M-04, R-03
PBDE-47	55.2	110	ug/kg	21.5	42.2	61	50-150	200	30	M-02, M-04, R-03
PBDE-49	20.2	110	ug/kg	21.5	1.52	87	50-150	200	30	M-02, M-04, R-03
PBDE-85	20.7	110	ug/kg	21.5	3.90	78	50-150	200	30	M-02, M-04, R-03
PBDE-99	29.7	110	ug/kg	21.5	13.6	75	50-150	200	30	M-02, M-04, R-03
Surrogate(s)										
Perylene-d12	*101*		*ug/kg*	*107*		*94*	*50-150*			
Triphenyl phosphate	*112*		*ug/kg*	*107*		*104*	*50-150*			

14859 Clark Avenue,City of Industry CA, 91745 | Phone: (626) 336-2139 | Fax: (626) 336-2634
www.wecklabs.com

Advanced Technology Laboratories
3275 Walnut Street
Signal Hill, CA 90755

Project Number: 2102631

Project Manager: Advanced Technology Labs

Reported:
01/21/2022 13:24

Notes and Definitions

Item	Definition
M-02	Due to the nature of matrix interferences, sample was diluted prior to preparation. The MDL and MRL were raised due to the dilution.
M-04	Due to the nature of matrix interferences, sample extract was diluted prior to analysis. The MDL and MRL were raised due to the dilution.
MS-01	The spike recovery for this QC sample is outside of established control limits possibly due to sample matrix interference.
R-03	The RPD is not applicable for result below the reporting limit (either ND or J value).
S-04	The surrogate recovery for this sample is outside of established control limits due to possible sample matrix effect.
%REC	Percent Recovery
Dil	Dilution
MRL	The minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. The MRL is also known as Limit of Quantitation (LOQ)
ND	NOT DETECTED at or above the Method Reporting Limit (MRL). If Method Detection Limit (MDL) is reported, then ND means not detected at or above the MDL.
RPD	Relative Percent Difference
Source	Sample that was matrix spiked or duplicated.

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

All results are expressed on wet weight basis unless otherwise specified.

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.

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ADVANCED TECHNOLOGY LABORATORIES

April 07, 2022

Timothy Wood/ Vinnie Robino/Josh Voss
GSI Environmental, Inc.
19200 Von Karman Ave., Suite 800
Irvine, CA 92612
Tel: (949) 679-1070
Fax:

ELAP No.: 1838
CSDLAC No.: 10196
ORELAP No.: CA300003

Re: ATL Work Order Number : 2200136
Client Reference : SATI / 6013

Enclosed are the results for sample(s) received on February 04, 2022 by Advanced Technology Laboratories. The sample(s) are tested for the parameters as indicated on the enclosed chain of custody in accordance with applicable laboratory certifications. The laboratory results contained in this report specifically pertains to the sample(s) submitted.

Thank you for the opportunity to serve the needs of your company. If you have any questions, please feel free to contact me or Project.Management@atlglobal.com.

Sincerely,

Victoria Michel

for

Victoria Michel, Project Assistant
Victoria.Michel@atlglobal.com
Authorized to Release on 04/07/22 10:37 on Behalf of

for

Amy Leung
Laboratory Director

The test results in this report relate exclusively to the samples as received by the laboratory, and meet the requirements of the methodology under which they were reported; any exceptions are noted within the report and/ or case narrative.

The cover letter/ signature page and the case narrative are integral parts of this analytical report; the absence of any portion of the report renders the report invalid. This report shall not be reproduced except in full, and shall have the express written approval of the laboratory, and the original client firm to do so

.

The electronic signature on this report is signed by an authorized signatory of Advanced Technology Laboratories, and is intended to be legally binding as the equivalent of a handwritten signature.

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612		Reported :	04/07/2022

SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Sample 12	2200136-01	Soil	2/04/22 13:20	2/04/22 16:00
Sample 13	2200136-02	Soil	2/04/22 13:25	2/04/22 16:00

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Notes and Definitions

S4	Surrogate was diluted out.
R	RPD value outside acceptance criteria. Calculation is based on raw values.
M6	Matrix spike analyte was diluted out.
M2	Matrix spike recovery outside of acceptance limit due to possible matrix interference. The analytical batch was validated by the laboratory control sample.
M1	Matrix spike recovery outside of acceptance limit. The analytical batch was validated by the laboratory control sample.
D1	Sample required dilution due to possible matrix interference.
B3	Analyte is detected in the associated method blank, but the analyte is at least 10x greater in the sample. Therefore, reanalysis is not necessary.
ND	Analyte is not detected at or above the Practical Quantitation Limit (PQL). When client requests quantitation against MDL, analyte is not detected at or above the Method Detection Limit (MDL)
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
NR	Not Reported
RPD	Relative Percent Difference
CA2	CA-ELAP (CDPH)
OR1	OR-NELAP (OSPHL)

Notes:
(1) The reported MDL and PQL are based on prep ratio variation and analytical dilution.
(2) The suffix [2C] of specific analytes signifies that the reported result is taken from the instrument's second column.
(3) Results are wet unless otherwise specified.

Certificate of Analysis

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Irvine , CA 92612		Reported :	04/07/2022

Percent Moisture

Analyte: Percent Moisture **Analyst: VJ**

Laboratory ID	Client Sample ID	Result	Units	PQL	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
2200136-01	Sample 12	**22**	% by Weight	0.10	1	B2B0899	02/07/2022	02/08/22 09:16	
2200136-02	Sample 13	**28**	% by Weight	0.10	1	B2B0899	02/07/2022	02/08/22 09:16	

Hexavalent Chromium by EPA 7196A/3060A

Analyte: Hexavalent Chromium **Analyst: VJ**

Laboratory ID	Client Sample ID	Result	Units	PQL	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
2200136-01	Sample 12	**13**	mg/kg dry	1.3	1	B2B0898	02/07/2022	02/07/22 13:33	
2200136-02	Sample 13	**9.5**	mg/kg dry	1.4	1	B2B0898	02/07/2022	02/07/22 13:33	

Mercury by AA (Cold Vapor) EPA 7471A

Analyte: Mercury **Analyst: AEG**

Laboratory ID	Client Sample ID	Result	Units	PQL	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
2200136-01	Sample 12	**3.1**	mg/kg dry	1.3	10	B2B0895	02/07/2022	02/07/22 12:06	
2200136-02	Sample 13	**3.3**	mg/kg dry	1.4	10	B2B0895	02/07/2022	02/07/22 12:08	

Certificate of Analysis

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19200 Von Karman Ave., Suite 800		Report To :	Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612		Reported :	04/07/2022

Client Sample ID: Sample 12
Lab ID: 2200136-01

Title 22 Metals by ICP-AES EPA 6010B

Analyst: WT

Analyte	Result (mg/kg dry)	PQL (mg/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	26	10	B2B0872	02/04/2022	02/07/22 14:43	
Arsenic	ND	13	10	B2B0872	02/04/2022	02/07/22 14:43	
Barium	**730**	13	10	B2B0872	02/04/2022	02/07/22 14:43	
Beryllium	ND	13	10	B2B0872	02/04/2022	02/07/22 14:43	
Cadmium	**24**	13	10	B2B0872	02/04/2022	02/07/22 14:43	
Chromium	**200**	13	10	B2B0872	02/04/2022	02/07/22 14:43	
Cobalt	**25**	13	10	B2B0872	02/04/2022	02/07/22 14:43	
Copper	**450**	26	10	B2B0872	02/04/2022	02/07/22 14:43	
Lead	**1100**	13	10	B2B0872	02/04/2022	02/07/22 14:43	
Molybdenum	**29**	13	10	B2B0872	02/04/2022	02/07/22 14:43	
Nickel	**170**	13	10	B2B0872	02/04/2022	02/07/22 14:43	
Selenium	ND	13	10	B2B0872	02/04/2022	02/07/22 14:43	
Silver	ND	13	10	B2B0872	02/04/2022	02/07/22 14:43	
Thallium	ND	13	10	B2B0872	02/04/2022	02/07/22 14:43	
Vanadium	**61**	13	10	B2B0872	02/04/2022	02/07/22 14:43	B3
Zinc	**6500**	13	10	B2B0872	02/04/2022	02/07/22 14:43	

Diesel and Oil Range Organics by EPA 8015B

Analyst: JV

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	ND	200	20	B2B0891	02/04/2022	02/07/22 11:51	D1
ORO	**710**	200	20	B2B0891	02/04/2022	02/07/22 11:51	D1
Surrogate: p-Terphenyl	*92.2 %*	*62 - 141*		B2B0891	02/04/2022	*02/07/22 11:51*	

Polychlorinated Biphenyls by EPA 8082

Analyst: KL

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aroclor 1016	ND	100	5	B2B0893	02/04/2022	02/08/22 14:08	
Aroclor 1221	ND	100	5	B2B0893	02/04/2022	02/08/22 14:08	
Aroclor 1232	ND	100	5	B2B0893	02/04/2022	02/08/22 14:08	
Aroclor 1242	**590**	100	5	B2B0893	02/04/2022	02/08/22 14:08	
Aroclor 1248	ND	100	5	B2B0893	02/04/2022	02/08/22 14:08	
Aroclor 1254	**780**	100	5	B2B0893	02/04/2022	02/08/22 14:08	
Aroclor 1260	**480**	100	5	B2B0893	02/04/2022	02/08/22 14:08	
Surrogate: Decachlorobiphenyl	*75.3 %*	*0 - 87*		B2B0893	02/04/2022	*02/08/22 14:08*	
Surrogate: Tetrachloro-m-xylene	*31.6 %*	*0 - 103*		B2B0893	02/04/2022	*02/08/22 14:08*	

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612		Reported :	04/07/2022

Client Sample ID: Sample 12
Lab ID: 2200136-01

Semivolatile Organic Compounds by EPA 8270C **Analyst: EB**

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,2,4-Trichlorobenzene	ND	210000	500	B2B0900	02/07/2022	02/07/22 15:34	D1
1,2-Dichlorobenzene	ND	210000	500	B2B0900	02/07/2022	02/07/22 15:34	D1
1,3-Dichlorobenzene	ND	210000	500	B2B0900	02/07/2022	02/07/22 15:34	D1
1,4-Dichlorobenzene	ND	210000	500	B2B0900	02/07/2022	02/07/22 15:34	D1
2,4,5-Trichlorophenol	ND	210000	500	B2B0900	02/07/2022	02/07/22 15:34	D1
2,4,6-Trichlorophenol	ND	210000	500	B2B0900	02/07/2022	02/07/22 15:34	D1
2,4-Dichlorophenol	ND	1100000	500	B2B0900	02/07/2022	02/07/22 15:34	D1
2,4-Dimethylphenol	ND	210000	500	B2B0900	02/07/2022	02/07/22 15:34	D1
2,4-Dinitrophenol	ND	1100000	500	B2B0900	02/07/2022	02/07/22 15:34	D1
2,4-Dinitrotoluene	ND	210000	500	B2B0900	02/07/2022	02/07/22 15:34	D1
2,6-Dinitrotoluene	ND	210000	500	B2B0900	02/07/2022	02/07/22 15:34	D1
2-Chloronaphthalene	ND	210000	500	B2B0900	02/07/2022	02/07/22 15:34	D1
2-Chlorophenol	ND	210000	500	B2B0900	02/07/2022	02/07/22 15:34	D1
2-Methylnaphthalene	ND	210000	500	B2B0900	02/07/2022	02/07/22 15:34	D1
2-Methylphenol	ND	210000	500	B2B0900	02/07/2022	02/07/22 15:34	D1
2-Nitroaniline	ND	1100000	500	B2B0900	02/07/2022	02/07/22 15:34	D1
2-Nitrophenol	ND	210000	500	B2B0900	02/07/2022	02/07/22 15:34	D1
3,3´-Dichlorobenzidine	ND	430000	500	B2B0900	02/07/2022	02/07/22 15:34	D1
3-Nitroaniline	ND	1100000	500	B2B0900	02/07/2022	02/07/22 15:34	D1
4,6-Dinitro-2-methyphenol	ND	1100000	500	B2B0900	02/07/2022	02/07/22 15:34	D1
4-Bromophenyl-phenylether	ND	210000	500	B2B0900	02/07/2022	02/07/22 15:34	D1
4-Chloro-3-methylphenol	ND	430000	500	B2B0900	02/07/2022	02/07/22 15:34	D1
4-Chloroaniline	ND	430000	500	B2B0900	02/07/2022	02/07/22 15:34	D1
4-Chlorophenyl-phenylether	ND	210000	500	B2B0900	02/07/2022	02/07/22 15:34	D1
4-Methylphenol	ND	210000	500	B2B0900	02/07/2022	02/07/22 15:34	D1
4-Nitroaniline	ND	1100000	500	B2B0900	02/07/2022	02/07/22 15:34	D1
4-Nitrophenol	ND	210000	500	B2B0900	02/07/2022	02/07/22 15:34	D1
Acenaphthene	ND	210000	500	B2B0900	02/07/2022	02/07/22 15:34	D1
Acenaphthylene	ND	210000	500	B2B0900	02/07/2022	02/07/22 15:34	D1
Anthracene	ND	210000	500	B2B0900	02/07/2022	02/07/22 15:34	D1
Benzidine (M)	ND	1100000	500	B2B0900	02/07/2022	02/07/22 15:34	D1
Benzo(a)anthracene	ND	210000	500	B2B0900	02/07/2022	02/07/22 15:34	D1
Benzo(a)pyrene	ND	210000	500	B2B0900	02/07/2022	02/07/22 15:34	D1
Benzo(b)fluoranthene	ND	210000	500	B2B0900	02/07/2022	02/07/22 15:34	D1
Benzo(g,h,i)perylene	ND	210000	500	B2B0900	02/07/2022	02/07/22 15:34	D1
Benzo(k)fluoranthene	ND	210000	500	B2B0900	02/07/2022	02/07/22 15:34	D1
Benzoic acid	ND	1100000	500	B2B0900	02/07/2022	02/07/22 15:34	D1
Benzyl alcohol	ND	430000	500	B2B0900	02/07/2022	02/07/22 15:34	D1
bis(2-chloroethoxy)methane	ND	210000	500	B2B0900	02/07/2022	02/07/22 15:34	D1
bis(2-Chloroethyl)ether	ND	210000	500	B2B0900	02/07/2022	02/07/22 15:34	D1

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612		Reported :	04/07/2022

Client Sample ID: Sample 12
Lab ID: 2200136-01

Semivolatile Organic Compounds by EPA 8270C **Analyst: EB**

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
bis(2-chloroisopropyl)ether	ND	210000	500	B2B0900	02/07/2022	02/07/22 15:34	D1
bis(2-ethylhexyl)phthalate	ND	210000	500	B2B0900	02/07/2022	02/07/22 15:34	D1
Butylbenzylphthalate	ND	210000	500	B2B0900	02/07/2022	02/07/22 15:34	D1
Chrysene	ND	210000	500	B2B0900	02/07/2022	02/07/22 15:34	D1
Di-n-butylphthalate	ND	210000	500	B2B0900	02/07/2022	02/07/22 15:34	D1
Di-n-octylphthalate	ND	210000	500	B2B0900	02/07/2022	02/07/22 15:34	D1
Dibenz(a,h)anthracene	ND	210000	500	B2B0900	02/07/2022	02/07/22 15:34	D1
Dibenzofuran	ND	210000	500	B2B0900	02/07/2022	02/07/22 15:34	D1
Diethyl phthalate	ND	210000	500	B2B0900	02/07/2022	02/07/22 15:34	D1
Dimethyl phthalate	ND	210000	500	B2B0900	02/07/2022	02/07/22 15:34	D1
Fluoranthene	ND	210000	500	B2B0900	02/07/2022	02/07/22 15:34	D1
Fluorene	ND	210000	500	B2B0900	02/07/2022	02/07/22 15:34	D1
Hexachlorobenzene	ND	210000	500	B2B0900	02/07/2022	02/07/22 15:34	D1
Hexachlorobutadiene	ND	430000	500	B2B0900	02/07/2022	02/07/22 15:34	D1
Hexachlorocyclopentadiene	ND	430000	500	B2B0900	02/07/2022	02/07/22 15:34	D1
Hexachloroethane	ND	210000	500	B2B0900	02/07/2022	02/07/22 15:34	D1
Indeno(1,2,3-cd)pyrene	ND	210000	500	B2B0900	02/07/2022	02/07/22 15:34	D1
Isophorone	ND	210000	500	B2B0900	02/07/2022	02/07/22 15:34	D1
N-Nitroso-di-n propylamine	ND	210000	500	B2B0900	02/07/2022	02/07/22 15:34	D1
N-Nitrosodiphenylamine	ND	210000	500	B2B0900	02/07/2022	02/07/22 15:34	D1
Naphthalene	ND	210000	500	B2B0900	02/07/2022	02/07/22 15:34	D1
Nitrobenzene	ND	210000	500	B2B0900	02/07/2022	02/07/22 15:34	D1
Pentachlorophenol	ND	1100000	500	B2B0900	02/07/2022	02/07/22 15:34	D1
Phenanthrene	ND	210000	500	B2B0900	02/07/2022	02/07/22 15:34	D1
Phenol	ND	210000	500	B2B0900	02/07/2022	02/07/22 15:34	D1
Pyrene	ND	210000	500	B2B0900	02/07/2022	02/07/22 15:34	D1
Pyridine	ND	1100000	500	B2B0900	02/07/2022	02/07/22 15:34	D1
Surrogate: 1,2-Dichlorobenzene-d4	*0%*	*23 - 102*		B2B0900	02/07/2022	*02/07/22 15:34*	S4
Surrogate: 2,4,6-Tribromophenol	*0%*	*3 - 138*		B2B0900	02/07/2022	*02/07/22 15:34*	S4
Surrogate: 2-Chlorophenol-d4	*0%*	*18 - 105*		B2B0900	02/07/2022	*02/07/22 15:34*	S4
Surrogate: 2-Fluorobiphenyl	*0%*	*34 - 106*		B2B0900	02/07/2022	*02/07/22 15:34*	S4
Surrogate: 2-Fluorophenol	*0%*	*16 - 94*		B2B0900	02/07/2022	*02/07/22 15:34*	S4
Surrogate: 4-Terphenyl-d14	*0%*	*31 - 130*		B2B0900	02/07/2022	*02/07/22 15:34*	S4
Surrogate: Nitrobenzene-d5	*0%*	*23 - 102*		B2B0900	02/07/2022	*02/07/22 15:34*	S4
Surrogate: Phenol-d6	*0%*	*14 - 104*		B2B0900	02/07/2022	*02/07/22 15:34*	S4

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612		Reported :	04/07/2022

Client Sample ID: Sample 13
Lab ID: 2200136-02

Title 22 Metals by ICP-AES EPA 6010B

Analyst: WT

Analyte	Result (mg/kg dry)	PQL (mg/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	28	10	B2B0872	02/04/2022	02/07/22 14:45	
Arsenic	**19**	14	10	B2B0872	02/04/2022	02/07/22 14:45	
Barium	**1300**	14	10	B2B0872	02/04/2022	02/07/22 14:45	
Beryllium	ND	14	10	B2B0872	02/04/2022	02/07/22 14:45	
Cadmium	**36**	14	10	B2B0872	02/04/2022	02/07/22 14:45	
Chromium	**240**	14	10	B2B0872	02/04/2022	02/07/22 14:45	
Cobalt	**25**	14	10	B2B0872	02/04/2022	02/07/22 14:45	
Copper	**790**	28	10	B2B0872	02/04/2022	02/07/22 14:45	
Lead	**1800**	14	10	B2B0872	02/04/2022	02/07/22 14:45	
Molybdenum	**32**	14	10	B2B0872	02/04/2022	02/07/22 14:45	
Nickel	**230**	14	10	B2B0872	02/04/2022	02/07/22 14:45	
Selenium	**17**	14	10	B2B0872	02/04/2022	02/07/22 14:45	
Silver	ND	14	10	B2B0872	02/04/2022	02/07/22 14:45	
Thallium	ND	14	10	B2B0872	02/04/2022	02/07/22 14:45	
Vanadium	**72**	14	10	B2B0872	02/04/2022	02/07/22 14:45	B3
Zinc	**8900**	14	10	B2B0872	02/04/2022	02/07/22 14:45	

Diesel and Oil Range Organics by EPA 8015B

Analyst: JV

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	ND	200	20	B2B0891	02/04/2022	02/07/22 12:09	D1
ORO	**240**	200	20	B2B0891	02/04/2022	02/07/22 12:09	D1
Surrogate: p-Terphenyl	*78.2 %*	*62 - 141*		B2B0891	02/04/2022	*02/07/22 12:09*	

Polychlorinated Biphenyls by EPA 8082

Analyst: KL

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aroclor 1016	ND	110	5	B2B0893	02/04/2022	02/08/22 14:27	
Aroclor 1221	ND	110	5	B2B0893	02/04/2022	02/08/22 14:27	
Aroclor 1232	ND	110	5	B2B0893	02/04/2022	02/08/22 14:27	
Aroclor 1242	**790**	110	5	B2B0893	02/04/2022	02/08/22 14:27	
Aroclor 1248	ND	110	5	B2B0893	02/04/2022	02/08/22 14:27	
Aroclor 1254	**1400**	110	5	B2B0893	02/04/2022	02/08/22 14:27	
Aroclor 1260	**820**	110	5	B2B0893	02/04/2022	02/08/22 14:27	
Surrogate: Decachlorobiphenyl	*50.4 %*	*0 - 87*		B2B0893	02/04/2022	*02/08/22 14:27*	
Surrogate: Tetrachloro-m-xylene	*19.3 %*	*0 - 103*		B2B0893	02/04/2022	*02/08/22 14:27*	

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612		Reported :	04/07/2022

Client Sample ID: Sample 13
Lab ID: 2200136-02

Semivolatile Organic Compounds by EPA 8270C **Analyst: EB**

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,2,4-Trichlorobenzene	ND	230000	500	B2B0900	02/07/2022	02/07/22 16:00	D1
1,2-Dichlorobenzene	ND	230000	500	B2B0900	02/07/2022	02/07/22 16:00	D1
1,3-Dichlorobenzene	ND	230000	500	B2B0900	02/07/2022	02/07/22 16:00	D1
1,4-Dichlorobenzene	ND	230000	500	B2B0900	02/07/2022	02/07/22 16:00	D1
2,4,5-Trichlorophenol	ND	230000	500	B2B0900	02/07/2022	02/07/22 16:00	D1
2,4,6-Trichlorophenol	ND	230000	500	B2B0900	02/07/2022	02/07/22 16:00	D1
2,4-Dichlorophenol	ND	1100000	500	B2B0900	02/07/2022	02/07/22 16:00	D1
2,4-Dimethylphenol	ND	230000	500	B2B0900	02/07/2022	02/07/22 16:00	D1
2,4-Dinitrophenol	ND	1100000	500	B2B0900	02/07/2022	02/07/22 16:00	D1
2,4-Dinitrotoluene	ND	230000	500	B2B0900	02/07/2022	02/07/22 16:00	D1
2,6-Dinitrotoluene	ND	230000	500	B2B0900	02/07/2022	02/07/22 16:00	D1
2-Chloronaphthalene	ND	230000	500	B2B0900	02/07/2022	02/07/22 16:00	D1
2-Chlorophenol	ND	230000	500	B2B0900	02/07/2022	02/07/22 16:00	D1
2-Methylnaphthalene	ND	230000	500	B2B0900	02/07/2022	02/07/22 16:00	D1
2-Methylphenol	ND	230000	500	B2B0900	02/07/2022	02/07/22 16:00	D1
2-Nitroaniline	ND	1100000	500	B2B0900	02/07/2022	02/07/22 16:00	D1
2-Nitrophenol	ND	230000	500	B2B0900	02/07/2022	02/07/22 16:00	D1
3,3´-Dichlorobenzidine	ND	460000	500	B2B0900	02/07/2022	02/07/22 16:00	D1
3-Nitroaniline	ND	1100000	500	B2B0900	02/07/2022	02/07/22 16:00	D1
4,6-Dinitro-2-methyphenol	ND	1100000	500	B2B0900	02/07/2022	02/07/22 16:00	D1
4-Bromophenyl-phenylether	ND	230000	500	B2B0900	02/07/2022	02/07/22 16:00	D1
4-Chloro-3-methylphenol	ND	460000	500	B2B0900	02/07/2022	02/07/22 16:00	D1
4-Chloroaniline	ND	460000	500	B2B0900	02/07/2022	02/07/22 16:00	D1
4-Chlorophenyl-phenylether	ND	230000	500	B2B0900	02/07/2022	02/07/22 16:00	D1
4-Methylphenol	ND	230000	500	B2B0900	02/07/2022	02/07/22 16:00	D1
4-Nitroaniline	ND	1100000	500	B2B0900	02/07/2022	02/07/22 16:00	D1
4-Nitrophenol	ND	230000	500	B2B0900	02/07/2022	02/07/22 16:00	D1
Acenaphthene	ND	230000	500	B2B0900	02/07/2022	02/07/22 16:00	D1
Acenaphthylene	ND	230000	500	B2B0900	02/07/2022	02/07/22 16:00	D1
Anthracene	ND	230000	500	B2B0900	02/07/2022	02/07/22 16:00	D1
Benzidine (M)	ND	1100000	500	B2B0900	02/07/2022	02/07/22 16:00	D1
Benzo(a)anthracene	ND	230000	500	B2B0900	02/07/2022	02/07/22 16:00	D1
Benzo(a)pyrene	ND	230000	500	B2B0900	02/07/2022	02/07/22 16:00	D1
Benzo(b)fluoranthene	ND	230000	500	B2B0900	02/07/2022	02/07/22 16:00	D1
Benzo(g,h,i)perylene	ND	230000	500	B2B0900	02/07/2022	02/07/22 16:00	D1
Benzo(k)fluoranthene	ND	230000	500	B2B0900	02/07/2022	02/07/22 16:00	D1
Benzoic acid	ND	1100000	500	B2B0900	02/07/2022	02/07/22 16:00	D1
Benzyl alcohol	ND	460000	500	B2B0900	02/07/2022	02/07/22 16:00	D1
bis(2-chloroethoxy)methane	ND	230000	500	B2B0900	02/07/2022	02/07/22 16:00	D1
bis(2-Chloroethyl)ether	ND	230000	500	B2B0900	02/07/2022	02/07/22 16:00	D1

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612		Reported :	04/07/2022

Client Sample ID: Sample 13
Lab ID: 2200136-02

Semivolatile Organic Compounds by EPA 8270C **Analyst: EB**

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
bis(2-chloroisopropyl)ether	ND	230000	500	B2B0900	02/07/2022	02/07/22 16:00	D1
bis(2-ethylhexyl)phthalate	ND	230000	500	B2B0900	02/07/2022	02/07/22 16:00	D1
Butylbenzylphthalate	ND	230000	500	B2B0900	02/07/2022	02/07/22 16:00	D1
Chrysene	ND	230000	500	B2B0900	02/07/2022	02/07/22 16:00	D1
Di-n-butylphthalate	ND	230000	500	B2B0900	02/07/2022	02/07/22 16:00	D1
Di-n-octylphthalate	ND	230000	500	B2B0900	02/07/2022	02/07/22 16:00	D1
Dibenz(a,h)anthracene	ND	230000	500	B2B0900	02/07/2022	02/07/22 16:00	D1
Dibenzofuran	ND	230000	500	B2B0900	02/07/2022	02/07/22 16:00	D1
Diethyl phthalate	ND	230000	500	B2B0900	02/07/2022	02/07/22 16:00	D1
Dimethyl phthalate	ND	230000	500	B2B0900	02/07/2022	02/07/22 16:00	D1
Fluoranthene	ND	230000	500	B2B0900	02/07/2022	02/07/22 16:00	D1
Fluorene	ND	230000	500	B2B0900	02/07/2022	02/07/22 16:00	D1
Hexachlorobenzene	ND	230000	500	B2B0900	02/07/2022	02/07/22 16:00	D1
Hexachlorobutadiene	ND	460000	500	B2B0900	02/07/2022	02/07/22 16:00	D1
Hexachlorocyclopentadiene	ND	460000	500	B2B0900	02/07/2022	02/07/22 16:00	D1
Hexachloroethane	ND	230000	500	B2B0900	02/07/2022	02/07/22 16:00	D1
Indeno(1,2,3-cd)pyrene	ND	230000	500	B2B0900	02/07/2022	02/07/22 16:00	D1
Isophorone	ND	230000	500	B2B0900	02/07/2022	02/07/22 16:00	D1
N-Nitroso-di-n propylamine	ND	230000	500	B2B0900	02/07/2022	02/07/22 16:00	D1
N-Nitrosodiphenylamine	ND	230000	500	B2B0900	02/07/2022	02/07/22 16:00	D1
Naphthalene	ND	230000	500	B2B0900	02/07/2022	02/07/22 16:00	D1
Nitrobenzene	ND	230000	500	B2B0900	02/07/2022	02/07/22 16:00	D1
Pentachlorophenol	ND	1100000	500	B2B0900	02/07/2022	02/07/22 16:00	D1
Phenanthrene	ND	230000	500	B2B0900	02/07/2022	02/07/22 16:00	D1
Phenol	ND	230000	500	B2B0900	02/07/2022	02/07/22 16:00	D1
Pyrene	ND	230000	500	B2B0900	02/07/2022	02/07/22 16:00	D1
Pyridine	ND	1100000	500	B2B0900	02/07/2022	02/07/22 16:00	D1
Surrogate: 1,2-Dichlorobenzene-d4	*0%*	*23 - 102*		B2B0900	02/07/2022	*02/07/22 16:00*	S4
Surrogate: 2,4,6-Tribromophenol	*0%*	*3 - 138*		B2B0900	02/07/2022	*02/07/22 16:00*	S4
Surrogate: 2-Chlorophenol-d4	*0%*	*18 - 105*		B2B0900	02/07/2022	*02/07/22 16:00*	S4
Surrogate: 2-Fluorobiphenyl	*0%*	*34 - 106*		B2B0900	02/07/2022	*02/07/22 16:00*	S4
Surrogate: 2-Fluorophenol	*0%*	*16 - 94*		B2B0900	02/07/2022	*02/07/22 16:00*	S4
Surrogate: 4-Terphenyl-d14	*0%*	*31 - 130*		B2B0900	02/07/2022	*02/07/22 16:00*	S4
Surrogate: Nitrobenzene-d5	*0%*	*23 - 102*		B2B0900	02/07/2022	*02/07/22 16:00*	S4
Surrogate: Phenol-d6	*0%*	*14 - 104*		B2B0900	02/07/2022	*02/07/22 16:00*	S4

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612		Reported :	04/07/2022

QUALITY CONTROL SECTION

Percent Moisture - Quality Control

Analyte	Result (% by Weight)	PQL (% by Weight)	MDL (% by Weight)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B2B0899 - No_Prep_WC1_S										
Duplicate (B2B0899-DUP1)			**Source: 2200136-01**			Prepared: 2/7/2022 Analyzed: 2/8/2022				
Percent Solids	81.1094	0.10	0.10		77.5771			4.45	30	

Certificate of Analysis

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Irvine , CA 92612		Reported :	04/07/2022

Title 22 Metals by ICP-AES EPA 6010B - Quality Control

Analyte	Result (mg/kg wet)	PQL (mg/kg wet)	MDL (mg/kg wet)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B2B0872 - EPA 3050B_S										
Blank (B2B0872-BLK1)						Prepared: 2/3/2022 Analyzed: 2/4/2022				
Antimony	ND	2.0	0.51							
Arsenic	ND	1.0	0.12							
Barium	ND	1.0	0.12							
Beryllium	ND	1.0	0.03							
Cadmium	ND	1.0	0.14							
Chromium	ND	1.0	0.26							
Cobalt	ND	1.0	0.07							
Copper	ND	2.0	0.19							
Lead	ND	1.0	0.18							
Molybdenum	ND	1.0	0.12							
Nickel	ND	1.0	0.18							
Selenium	ND	1.0	0.40							
Silver	ND	1.0	0.12							
Thallium	ND	1.0	0.38							
Vanadium	ND	1.0	0.06							B3
Zinc	ND	1.0	0.15							
LCS (B2B0872-BS1)						Prepared: 2/3/2022 Analyzed: 2/4/2022				
Antimony	24.9242	2.0	0.51	25.0000		99.7	80 - 120			
Arsenic	24.4259	1.0	0.12	25.0000		97.7	80 - 120			
Barium	26.0213	1.0	0.12	25.0000		104	80 - 120			
Beryllium	25.4538	1.0	0.03	25.0100		102	80 - 120			
Cadmium	25.8622	1.0	0.14	25.0000		103	80 - 120			
Chromium	25.5990	1.0	0.26	25.0000		102	80 - 120			
Cobalt	26.5133	1.0	0.07	25.0000		106	80 - 120			
Copper	26.1301	2.0	0.19	25.0000		105	80 - 120			
Lead	25.3690	1.0	0.18	25.0000		101	80 - 120			
Molybdenum	26.4560	1.0	0.12	25.0000		106	80 - 120			
Nickel	26.6093	1.0	0.18	25.0000		106	80 - 120			
Selenium	25.0584	1.0	0.40	25.0000		100	80 - 120			
Silver	11.7711	1.0	0.12	12.5000		94.2	80 - 120			
Thallium	25.6966	1.0	0.38	25.0000		103	80 - 120			
Vanadium	25.9607	1.0	0.06	25.0000		104	80 - 120			
Zinc	25.2350	1.0	0.15	25.0000		101	80 - 120			
Matrix Spike (B2B0872-MS1)			**Source: 2200092-07**			Prepared: 2/3/2022 Analyzed: 2/4/2022				
Antimony	5.89438	2.0	0.51	25.0000	ND	23.6	0 - 102			
Arsenic	25.2952	1.0	0.12	25.0000	5.71012	78.3	55 - 117			
Barium	115.248	1.0	0.12	25.0000	87.5683	111	11 - 177			
Beryllium	21.5374	1.0	0.03	25.0100	0.531376	84.0	64 - 115			
Cadmium	22.0356	1.0	0.14	25.0000	0.867816	84.7	62 - 116			
Chromium	55.8795	1.0	0.26	25.0000	37.6466	72.9	42 - 145			
Cobalt	36.1253	1.0	0.07	25.0000	13.7775	89.4	60 - 126			
Copper	72.1460	2.0	0.19	25.0000	49.8688	89.1	37 - 163			
Lead	198.106	1.0	0.18	25.0000	188.252	39.4	26 - 161			

Certificate of Analysis

GSI Environmental, Inc.	Project Number : SATI / 6013
19200 Von Karman Ave., Suite 800	Report To : Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612	Reported : 04/07/2022

Title 22 Metals by ICP-AES EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/kg wet)	PQL (mg/kg wet)	MDL (mg/kg wet)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B2B0872 - EPA 3050B_S (continued)										
Matrix Spike (B2B0872-MS1) - Continued			**Source: 2200092-07**			Prepared: 2/3/2022 Analyzed: 2/4/2022				
Molybdenum	23.0776	1.0	0.12	25.0000	4.08503	76.0	31 - 122			
Nickel	46.4167	1.0	0.18	25.0000	22.6862	94.9	52 - 130			
Selenium	18.9422	1.0	0.40	25.0000	ND	75.8	25 - 129			
Silver	10.4717	1.0	0.12	12.5000	ND	83.8	48 - 133			
Thallium	14.3821	1.0	0.38	25.0000	ND	57.5	25 - 119			
Vanadium	54.7945	1.0	0.06	25.0000	34.8086	79.9	51 - 141			
Zinc	254.013	1.0	0.15	25.0000	152.337	407	8 - 170			M2
Matrix Spike Dup (B2B0872-MSD1)			**Source: 2200092-07**			Prepared: 2/3/2022 Analyzed: 2/4/2022				
Antimony	6.94328	2.0	0.51	25.0000	ND	27.8	0 - 102	16.3	20	
Arsenic	26.2860	1.0	0.12	25.0000	5.71012	82.3	55 - 117	3.84	20	
Barium	113.296	1.0	0.12	25.0000	87.5683	103	11 - 177	1.71	20	
Beryllium	21.5844	1.0	0.03	25.0100	0.531376	84.2	64 - 115	0.218	20	
Cadmium	22.2452	1.0	0.14	25.0000	0.867816	85.5	62 - 116	0.946	20	
Chromium	56.4726	1.0	0.26	25.0000	37.6466	75.3	42 - 145	1.06	20	
Cobalt	36.6010	1.0	0.07	25.0000	13.7775	91.3	60 - 126	1.31	20	
Copper	70.2080	2.0	0.19	25.0000	49.8688	81.4	37 - 163	2.72	20	
Lead	201.761	1.0	0.18	25.0000	188.252	54.0	26 - 161	1.83	20	
Molybdenum	23.6332	1.0	0.12	25.0000	4.08503	78.2	31 - 122	2.38	20	
Nickel	47.0068	1.0	0.18	25.0000	22.6862	97.3	52 - 130	1.26	20	
Selenium	19.0462	1.0	0.40	25.0000	ND	76.2	25 - 129	0.548	20	
Silver	10.7220	1.0	0.12	12.5000	ND	85.8	48 - 133	2.36	20	
Thallium	14.9312	1.0	0.38	25.0000	ND	59.7	25 - 119	3.75	20	
Vanadium	54.4376	1.0	0.06	25.0000	34.8086	78.5	51 - 141	0.653	20	
Zinc	251.938	1.0	0.15	25.0000	152.337	398	8 - 170	0.820	20	M2

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612		Reported :	04/07/2022

Hexavalent Chromium by EPA 7196A/3060A - Quality Control

Analyte	Result (mg/kg dry)	PQL (mg/kg dry)	MDL (mg/kg dry)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B2B0898 - EPA 3060A_S (WC)										
Matrix Spike (B2B0898-MS1)			**Source: 2200136-01**			Prepared: 2/7/2022 Analyzed: 2/7/2022				
Hexavalent Chromium	56.8467	1.3	0.50	64.4520	13.2771	67.6	75 - 125			M1
Matrix Spike (B2B0898-MS2)			**Source: 2200136-01**			Prepared: 2/7/2022 Analyzed: 2/7/2022				
Hexavalent Chromium	2081.80	64	25	2570.24	ND	81.0	75 - 125			
Matrix Spike Dup (B2B0898-MSD1)			**Source: 2200136-01**			Prepared: 2/7/2022 Analyzed: 2/7/2022				
Hexavalent Chromium	56.8467	1.3	0.50	64.4520	13.2771	67.6	75 - 125	0.00	20	M1

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612		Reported :	04/07/2022

Hexavalent Chromium by EPA 7196A/3060A - Quality Control

Analyte	Result (mg/kg wet)	PQL (mg/kg wet)	MDL (mg/kg wet)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B2B0898 - EPA 3060A_S (WC)										
Blank (B2B0898-BLK1)						Prepared: 2/7/2022 Analyzed: 2/7/2022				
Hexavalent Chromium	ND	1.0	0.39							
LCS (B2B0898-BS1)						Prepared: 2/7/2022 Analyzed: 2/7/2022				
Hexavalent Chromium	41.7000	1.0	0.39	50.0000		83.4	80 - 120			

Certificate of Analysis

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19200 Von Karman Ave., Suite 800		Report To :	Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612		Reported :	04/07/2022

Mercury by AA (Cold Vapor) EPA 7471A - Quality Control

Analyte	Result (mg/kg wet)	PQL (mg/kg wet)	MDL (mg/kg wet)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B2B0895 - EPA 7471_S										
Blank (B2B0895-BLK1)						Prepared: 2/7/2022 Analyzed: 2/7/2022				
Mercury	ND	0.10	0.01							
LCS (B2B0895-BS1)						Prepared: 2/7/2022 Analyzed: 2/7/2022				
Mercury	0.416757	0.10	0.01	0.416667		100	80 - 120			
Matrix Spike (B2B0895-MS1)			**Source: 2200135-01**			Prepared: 2/7/2022 Analyzed: 2/7/2022				
Mercury	0.450246	0.10	0.01	0.416667	ND	108	70 - 130			

Certificate of Analysis

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19200 Von Karman Ave., Suite 800		Report To :	Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612		Reported :	04/07/2022

Mercury by AA (Cold Vapor) EPA 7471A - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B2B0895 - EPA 7471_S									
Post Spike (B2B0895-PS1)			**Source: 2200135-01**		Prepared: 2/7/2022 Analyzed: 2/7/2022				
Mercury	0.005073		5.00000E-3	-0.000337	101	85 - 115			

Certificate of Analysis

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Irvine , CA 92612		Reported :	04/07/2022

Diesel and Oil Range Organics by EPA 8015B - Quality Control

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B2B0891 - GCSEMI_DRO_S										
Blank (B2B0891-BLK1)						Prepared: 2/4/2022 Analyzed: 2/7/2022				
DRO	ND	10	3.6							
ORO	ND	10	3.6							
Surrogate: p-Terphenyl	*64.68*			*80.0000*		*80.9*	*62 - 141*			
LCS (B2B0891-BS1)						Prepared: 2/4/2022 Analyzed: 2/7/2022				
DRO	970.394	10	3.6	1000.00		97.0	56 - 139			
Surrogate: p-Terphenyl	*76.54*			*80.0000*		*95.7*	*62 - 141*			
Matrix Spike (B2B0891-MS1)			**Source: 2200135-01**			Prepared: 2/4/2022 Analyzed: 2/7/2022				
DRO	1737.11	10	3.6	1000.00	988.988	74.8	38 - 161			
Surrogate: p-Terphenyl	*66.40*			*80.0000*		*83.0*	*62 - 141*			
Matrix Spike Dup (B2B0891-MSD1)			**Source: 2200135-01**			Prepared: 2/4/2022 Analyzed: 2/7/2022				
DRO	2191.92	10	3.6	1000.00	988.988	120	38 - 161	23.2	20	R
Surrogate: p-Terphenyl	*68.32*			*80.0000*		*85.4*	*62 - 141*			

Certificate of Analysis

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Irvine , CA 92612	Reported : 04/07/2022

Polychlorinated Biphenyls by EPA 8082 - Quality Control

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	MDL (ug/kg dry)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B2B0893 - GCSEMI_PCB/PEST_S										
Matrix Spike (B2B0893-MS1)			**Source: 2200136-01**			Prepared: 2/4/2022 Analyzed: 2/8/2022				
Aroclor 1016	556.442	100	13	214.840	ND	259	0 - 135			M6
Aroclor 1260	539.506	100	13	214.840	475.685	29.7	0 - 127			
Surrogate: Decachlorobiphenyl	*12.33*			*21.4840*		*57.4*	*0 - 87*			
Surrogate: Tetrachloro-m-xylene	*5.542*			*21.4840*		*25.8*	*0 - 103*			
Matrix Spike Dup (B2B0893-MSD1)			**Source: 2200136-01**			Prepared: 2/4/2022 Analyzed: 2/8/2022				
Aroclor 1016	853.700	100	13	214.840	ND	397	0 - 135	42.2	20	M6, R
Aroclor 1260	846.747	100	13	214.840	475.685	173	0 - 127	44.3	20	M6, R
Surrogate: Decachlorobiphenyl	*21.56*			*21.4840*		*100*	*0 - 87*			S4
Surrogate: Tetrachloro-m-xylene	*8.877*			*21.4840*		*41.3*	*0 - 103*			

Certificate of Analysis

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19200 Von Karman Ave., Suite 800		Report To :	Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612		Reported :	04/07/2022

Polychlorinated Biphenyls by EPA 8082 - Quality Control

Analyte	Result (ug/kg wet)	PQL (ug/kg wet)	MDL (ug/kg wet)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B2B0893 - GCSEMI_PCB/PEST_S										
Blank (B2B0893-BLK1)						Prepared: 2/4/2022 Analyzed: 2/8/2022				
Aroclor 1016	ND	16	1.9							
Aroclor 1221	ND	16	1.9							
Aroclor 1232	ND	16	1.9							
Aroclor 1242	ND	16	1.9							
Aroclor 1248	ND	16	1.9							
Aroclor 1254	ND	16	1.9							
Aroclor 1260	ND	16	1.9							
Surrogate: Decachlorobiphenyl	*10.18*			*16.6667*		*61.1*	*0 - 87*			
Surrogate: Tetrachloro-m-xylene	*7.500*			*16.6667*		*45.0*	*0 - 103*			
LCS (B2B0893-BS1)						Prepared: 2/4/2022 Analyzed: 2/8/2022				
Aroclor 1016	80.6937	16	1.9	166.667		48.4	11 - 108			
Aroclor 1260	117.205	16	1.9	166.667		70.3	19 - 112			
Surrogate: Decachlorobiphenyl	*13.20*			*16.6667*		*79.2*	*0 - 87*			
Surrogate: Tetrachloro-m-xylene	*7.206*			*16.6667*		*43.2*	*0 - 103*			

Certificate of Analysis

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19200 Von Karman Ave., Suite 800	Report To : Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612	Reported : 04/07/2022

Semivolatile Organic Compounds by EPA 8270C - Quality Control

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	MDL (ug/kg dry)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B2B0900 - MSSEMI_NAL										
Matrix Spike (B2B0900-MS1)		**Source: 2200136-01**			Prepared: 2/7/2022 Analyzed: 2/7/2022					
1,2,4-Trichlorobenzene	ND	210000	32000	8593.60	ND	NR	35 - 113			M6
1,2-Dichlorobenzene	ND	210000	17000	8593.60	ND	NR	32 - 102			M6
1,3-Dichlorobenzene	ND	210000	18000	8593.60	ND	NR	32 - 100			M6
1,4-Dichlorobenzene	ND	210000	17000	8593.60	ND	NR	33 - 97			M6
2,4,5-Trichlorophenol	ND	210000	19000	8593.60	ND	NR	36 - 124			M6
2,4,6-Trichlorophenol	ND	210000	22000	8593.60	ND	NR	37 - 130			M6
2,4-Dichlorophenol	ND	1100000	22000	8593.60	ND	NR	32 - 130			M6
2,4-Dimethylphenol	ND	210000	17000	8593.60	ND	NR	30 - 128			M6
2,4-Dinitrophenol	ND	1100000	55000	8593.60	ND	NR	0 - 203			
2,4-Dinitrotoluene	ND	210000	21000	8593.60	ND	NR	21 - 168			M6
2,6-Dinitrotoluene	ND	210000	31000	8593.60	ND	NR	31 - 152			M6
2-Chloronaphthalene	ND	210000	18000	8593.60	ND	NR	33 - 130			M6
2-Chlorophenol	ND	210000	20000	8593.60	ND	NR	32 - 106			M6
2-Methylnaphthalene	ND	210000	17000	8593.60	ND	NR	33 - 125			M6
2-Methylphenol	ND	210000	23000	8593.60	ND	NR	34 - 96			M6
2-Nitroaniline	ND	1100000	27000	8593.60	ND	NR	30 - 146			M6
2-Nitrophenol	ND	210000	29000	8593.60	ND	NR	22 - 125			M6
3,3´-Dichlorobenzidine	ND	430000	180000	8593.60	ND	NR	19 - 144			M6
3-Nitroaniline	ND	1100000	32000	8593.60	ND	NR	36 - 133			M6
4,6-Dinitro-2-methyphenol	ND	1100000	27000	8593.60	ND	NR	0 - 196			
4-Bromophenyl-phenylether	ND	210000	41000	8593.60	ND	NR	41 - 121			M6
4-Chloro-3-methylphenol	ND	430000	46000	8593.60	ND	NR	39 - 134			M6
4-Chloroaniline	ND	430000	34000	8593.60	ND	NR	37 - 115			M6
4-Chlorophenyl-phenylether	ND	210000	22000	8593.60	ND	NR	34 - 133			M6
4-Methylphenol	ND	210000	37000	4296.80	ND	NR	34 - 121			M6
4-Nitroaniline	ND	1100000	24000	8593.60	ND	NR	30 - 138			M6
4-Nitrophenol	ND	210000	41000	8593.60	ND	NR	5 - 154			M6
Acenaphthene	ND	210000	28000	8593.60	ND	NR	33 - 121			M6
Acenaphthylene	ND	210000	40000	8593.60	ND	NR	35 - 120			M6
Anthracene	ND	210000	33000	8593.60	ND	NR	28 - 133			M6
Benzidine (M)	ND	1100000	920000	8593.60	ND	NR	8 - 175			M6
Benzo(a)anthracene	ND	210000	28000	8593.60	ND	NR	32 - 127			M6
Benzo(a)pyrene	ND	210000	41000	8593.60	ND	NR	35 - 127			M6
Benzo(b)fluoranthene	ND	210000	42000	8593.60	ND	NR	29 - 126			M6
Benzo(g,h,i)perylene	ND	210000	52000	8593.60	ND	NR	26 - 129			M6
Benzo(k)fluoranthene	ND	210000	21000	8593.60	ND	NR	36 - 120			M6
Benzoic acid	ND	1100000	580000	8593.60	ND	NR	0 - 208			
Benzyl alcohol	ND	430000	21000	8593.60	ND	NR	32 - 120			M6
bis(2-chloroethoxy)methane	ND	210000	41000	8593.60	ND	NR	34 - 108			M6
bis(2-Chloroethyl)ether	ND	210000	43000	8593.60	ND	NR	34 - 100			M6
bis(2-chloroisopropyl)ether	ND	210000	49000	8593.60	ND	NR	21 - 111			M6
bis(2-ethylhexyl)phthalate	ND	210000	41000	8593.60	ND	NR	39 - 131			M6
Butylbenzylphthalate	ND	210000	27000	8593.60	ND	NR	39 - 129			M6
Chrysene	ND	210000	54000	8593.60	ND	NR	33 - 126			M6
Di-n-butylphthalate	ND	210000	33000	8593.60	ND	NR	42 - 122			M6

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19200 Von Karman Ave., Suite 800	Report To : Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612	Reported : 04/07/2022

Semivolatile Organic Compounds by EPA 8270C - Quality Control (cont'd)

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	MDL (ug/kg dry)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B2B0900 - MSSEMI_NAL (continued)										
Matrix Spike (B2B0900-MS1) - Continued		**Source: 2200136-01**			Prepared: 2/7/2022 Analyzed: 2/7/2022					
Di-n-octylphthalate	ND	210000	40000	8593.60	ND	NR	30 - 147			M6
Dibenz(a,h)anthracene	ND	210000	29000	8593.60	ND	NR	30 - 126			M6
Dibenzofuran	ND	210000	37000	8593.60	ND	NR	36 - 133			M6
Diethyl phthalate	ND	210000	38000	8593.60	ND	NR	28 - 139			M6
Dimethyl phthalate	ND	210000	26000	8593.60	ND	NR	32 - 129			M6
Fluoranthene	ND	210000	39000	8593.60	ND	NR	23 - 140			M6
Fluorene	ND	210000	68000	8593.60	ND	NR	32 - 130			M6
Hexachlorobenzene	ND	210000	35000	8593.60	ND	NR	27 - 148			M6
Hexachlorobutadiene	ND	430000	34000	8593.60	ND	NR	29 - 112			M6
Hexachlorocyclopentadiene	ND	430000	45000	8593.60	ND	NR	13 - 147			M6
Hexachloroethane	ND	210000	60000	8593.60	ND	NR	31 - 104			M6
Indeno(1,2,3-cd)pyrene	ND	210000	49000	8593.60	ND	NR	21 - 137			M6
Isophorone	ND	210000	54000	8593.60	ND	NR	34 - 112			M6
N-Nitroso-di-n propylamine	ND	210000	39000	8593.60	ND	NR	36 - 115			M6
N-Nitrosodiphenylamine	ND	210000	20000	8593.60	ND	NR	40 - 120			M6
Naphthalene	ND	210000	36000	8593.60	ND	NR	33 - 108			M6
Nitrobenzene	ND	210000	37000	8593.60	ND	NR	32 - 122			M6
Pentachlorophenol	ND	1100000	32000	8593.60	ND	NR	0 - 151			
Phenanthrene	ND	210000	43000	8593.60	ND	NR	40 - 122			M6
Phenol	ND	210000	22000	8593.60	ND	NR	35 - 112			M6
Pyrene	ND	210000	47000	8593.60	ND	NR	28 - 132			M6
Pyridine	ND	1100000	170000	8593.60	ND	NR	5 - 107			M6
Surrogate: 1,2-Dichlorobenzene-d4	*0.000*			*8593.60*		*NR*	*23 - 102*			S4
Surrogate: 2,4,6-Tribromophenol	*0.000*			*12890.4*		*NR*	*3 - 138*			S4
Surrogate: 2-Chlorophenol-d4	*0.000*			*12890.4*		*NR*	*18 - 105*			S4
Surrogate: 2-Fluorobiphenyl	*0.000*			*8593.60*		*NR*	*34 - 106*			S4
Surrogate: 2-Fluorophenol	*0.000*			*12890.4*		*NR*	*16 - 94*			S4
Surrogate: 4-Terphenyl-d14	*0.000*			*8593.60*		*NR*	*31 - 130*			S4
Surrogate: Nitrobenzene-d5	*0.000*			*8593.60*		*NR*	*23 - 102*			S4
Surrogate: Phenol-d6	*0.000*			*12890.4*		*NR*	*14 - 104*			S4
Matrix Spike Dup (B2B0900-MSD1)		**Source: 2200136-01**			Prepared: 2/7/2022 Analyzed: 2/7/2022					
1,2,4-Trichlorobenzene	ND	210000	32000	8593.60	ND	NR	35 - 113	NR	20	M6
1,2-Dichlorobenzene	ND	210000	17000	8593.60	ND	NR	32 - 102	NR	20	M6
1,3-Dichlorobenzene	ND	210000	18000	8593.60	ND	NR	32 - 100	NR	20	M6
1,4-Dichlorobenzene	ND	210000	17000	8593.60	ND	NR	33 - 97	NR	20	M6
2,4,5-Trichlorophenol	ND	210000	19000	8593.60	ND	NR	36 - 124	NR	20	M6
2,4,6-Trichlorophenol	ND	210000	22000	8593.60	ND	NR	37 - 130	NR	20	M6
2,4-Dichlorophenol	ND	1100000	22000	8593.60	ND	NR	32 - 130	NR	20	M6
2,4-Dimethylphenol	ND	210000	17000	8593.60	ND	NR	30 - 128	NR	20	M6
2,4-Dinitrophenol	ND	1100000	55000	8593.60	ND	NR	0 - 203	NR	20	
2,4-Dinitrotoluene	ND	210000	21000	8593.60	ND	NR	21 - 168	NR	20	M6
2,6-Dinitrotoluene	ND	210000	31000	8593.60	ND	NR	31 - 152	NR	20	M6
2-Chloronaphthalene	ND	210000	18000	8593.60	ND	NR	33 - 130	NR	20	M6
2-Chlorophenol	ND	210000	20000	8593.60	ND	NR	32 - 106	NR	20	M6

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19200 Von Karman Ave., Suite 800	Report To : Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612	Reported : 04/07/2022

Semivolatile Organic Compounds by EPA 8270C - Quality Control (cont'd)

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	MDL (ug/kg dry)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B2B0900 - MSSEMI_NAL (continued)										
Matrix Spike Dup (B2B0900-MSD1) - Continued		**Source: 2200136-01**				Prepared: 2/7/2022 Analyzed: 2/7/2022				
2-Methylnaphthalene	ND	210000	17000	8593.60	ND	NR	33 - 125	NR	20	M6
2-Methylphenol	ND	210000	23000	8593.60	ND	NR	34 - 96	NR	20	M6
2-Nitroaniline	ND	1100000	27000	8593.60	ND	NR	30 - 146	NR	20	M6
2-Nitrophenol	ND	210000	29000	8593.60	ND	NR	22 - 125	NR	20	M6
3,3´-Dichlorobenzidine	ND	430000	180000	8593.60	ND	NR	19 - 144	NR	20	M6
3-Nitroaniline	ND	1100000	32000	8593.60	ND	NR	36 - 133	NR	20	M6
4,6-Dinitro-2-methyphenol	ND	1100000	27000	8593.60	ND	NR	0 - 196	NR	20	
4-Bromophenyl-phenylether	ND	210000	41000	8593.60	ND	NR	41 - 121	NR	20	M6
4-Chloro-3-methylphenol	ND	430000	46000	8593.60	ND	NR	39 - 134	NR	20	M6
4-Chloroaniline	ND	430000	34000	8593.60	ND	NR	37 - 115	NR	20	M6
4-Chlorophenyl-phenylether	ND	210000	22000	8593.60	ND	NR	34 - 133	NR	20	M6
4-Methylphenol	ND	210000	37000	4296.80	ND	NR	34 - 121	NR	20	M6
4-Nitroaniline	ND	1100000	24000	8593.60	ND	NR	30 - 138	NR	20	M6
4-Nitrophenol	ND	210000	41000	8593.60	ND	NR	5 - 154	NR	20	M6
Acenaphthene	ND	210000	28000	8593.60	ND	NR	33 - 121	NR	20	M6
Acenaphthylene	ND	210000	40000	8593.60	ND	NR	35 - 120	NR	20	M6
Anthracene	ND	210000	33000	8593.60	ND	NR	28 - 133	NR	20	M6
Benzidine (M)	ND	1100000	920000	8593.60	ND	NR	8 - 175	NR	20	M6
Benzo(a)anthracene	ND	210000	28000	8593.60	ND	NR	32 - 127	NR	20	M6
Benzo(a)pyrene	ND	210000	41000	8593.60	ND	NR	35 - 127	NR	20	M6
Benzo(b)fluoranthene	ND	210000	42000	8593.60	ND	NR	29 - 126	NR	20	M6
Benzo(g,h,i)perylene	ND	210000	52000	8593.60	ND	NR	26 - 129	NR	20	M6
Benzo(k)fluoranthene	ND	210000	21000	8593.60	ND	NR	36 - 120	NR	20	M6
Benzoic acid	ND	1100000	580000	8593.60	ND	NR	0 - 208	NR	20	
Benzyl alcohol	ND	430000	21000	8593.60	ND	NR	32 - 120	NR	20	M6
bis(2-chloroethoxy)methane	ND	210000	41000	8593.60	ND	NR	34 - 108	NR	20	M6
bis(2-Chloroethyl)ether	ND	210000	43000	8593.60	ND	NR	34 - 100	NR	20	M6
bis(2-chloroisopropyl)ether	ND	210000	49000	8593.60	ND	NR	21 - 111	NR	20	M6
bis(2-ethylhexyl)phthalate	ND	210000	41000	8593.60	ND	NR	39 - 131	NR	20	M6
Butylbenzylphthalate	ND	210000	27000	8593.60	ND	NR	39 - 129	NR	20	M6
Chrysene	ND	210000	54000	8593.60	ND	NR	33 - 126	NR	20	M6
Di-n-butylphthalate	ND	210000	33000	8593.60	ND	NR	42 - 122	NR	20	M6
Di-n-octylphthalate	ND	210000	40000	8593.60	ND	NR	30 - 147	NR	20	M6
Dibenz(a,h)anthracene	ND	210000	29000	8593.60	ND	NR	30 - 126	NR	20	M6
Dibenzofuran	ND	210000	37000	8593.60	ND	NR	36 - 133	NR	20	M6
Diethyl phthalate	ND	210000	38000	8593.60	ND	NR	28 - 139	NR	20	M6
Dimethyl phthalate	ND	210000	26000	8593.60	ND	NR	32 - 129	NR	20	M6
Fluoranthene	ND	210000	39000	8593.60	ND	NR	23 - 140	NR	20	M6
Fluorene	ND	210000	68000	8593.60	ND	NR	32 - 130	NR	20	M6
Hexachlorobenzene	ND	210000	35000	8593.60	ND	NR	27 - 148	NR	20	M6
Hexachlorobutadiene	ND	430000	34000	8593.60	ND	NR	29 - 112	NR	20	M6
Hexachlorocyclopentadiene	ND	430000	45000	8593.60	ND	NR	13 - 147	NR	20	M6
Hexachloroethane	ND	210000	60000	8593.60	ND	NR	31 - 104	NR	20	M6
Indeno(1,2,3-cd)pyrene	ND	210000	49000	8593.60	ND	NR	21 - 137	NR	20	M6
Isophorone	ND	210000	54000	8593.60	ND	NR	34 - 112	NR	20	M6

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612		Reported :	04/07/2022

Semivolatile Organic Compounds by EPA 8270C - Quality Control (cont'd)

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	MDL (ug/kg dry)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B2B0900 - MSSEMI_NAL (continued)										
Matrix Spike Dup (B2B0900-MSD1) - Continued		**Source: 2200136-01**			Prepared: 2/7/2022 Analyzed: 2/7/2022					
N-Nitroso-di-n propylamine	ND	210000	39000	8593.60	ND	NR	36 - 115	NR	20	M6
N-Nitrosodiphenylamine	ND	210000	20000	8593.60	ND	NR	40 - 120	NR	20	M6
Naphthalene	ND	210000	36000	8593.60	ND	NR	33 - 108	NR	20	M6
Nitrobenzene	ND	210000	37000	8593.60	ND	NR	32 - 122	NR	20	M6
Pentachlorophenol	ND	1100000	32000	8593.60	ND	NR	0 - 151	NR	20	
Phenanthrene	ND	210000	43000	8593.60	ND	NR	40 - 122	NR	20	M6
Phenol	ND	210000	22000	8593.60	ND	NR	35 - 112	NR	20	M6
Pyrene	ND	210000	47000	8593.60	ND	NR	28 - 132	NR	20	M6
Pyridine	ND	1100000	170000	8593.60	ND	NR	5 - 107	NR	20	M6
Surrogate: 1,2-Dichlorobenzene-d4	*0.000*			*8593.60*		*NR*	*23 - 102*			S4
Surrogate: 2,4,6-Tribromophenol	*0.000*			*12890.4*		*NR*	*3 - 138*			S4
Surrogate: 2-Chlorophenol-d4	*0.000*			*12890.4*		*NR*	*18 - 105*			S4
Surrogate: 2-Fluorobiphenyl	*0.000*			*8593.60*		*NR*	*34 - 106*			S4
Surrogate: 2-Fluorophenol	*0.000*			*12890.4*		*NR*	*16 - 94*			S4
Surrogate: 4-Terphenyl-d14	*0.000*			*8593.60*		*NR*	*31 - 130*			S4
Surrogate: Nitrobenzene-d5	*0.000*			*8593.60*		*NR*	*23 - 102*			S4
Surrogate: Phenol-d6	*0.000*			*12890.4*		*NR*	*14 - 104*			S4

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612		Reported :	04/07/2022

Semivolatile Organic Compounds by EPA 8270C - Quality Control

Analyte	Result (ug/kg wet)	PQL (ug/kg wet)	MDL (ug/kg wet)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B2B0900 - MSSEMI_NAL										
Blank (B2B0900-BLK1)							Prepared: 2/7/2022 Analyzed: 2/7/2022			
1,2,4-Trichlorobenzene	ND	330	50							
1,2-Dichlorobenzene	ND	330	26							
1,3-Dichlorobenzene	ND	330	27							
1,4-Dichlorobenzene	ND	330	27							
2,4,5-Trichlorophenol	ND	330	30							
2,4,6-Trichlorophenol	ND	330	35							
2,4-Dichlorophenol	ND	1600	34							
2,4-Dimethylphenol	ND	330	26							
2,4-Dinitrophenol	ND	1600	86							
2,4-Dinitrotoluene	ND	330	33							
2,6-Dinitrotoluene	ND	330	49							
2-Chloronaphthalene	ND	330	28							
2-Chlorophenol	ND	330	31							
2-Methylnaphthalene	ND	330	27							
2-Methylphenol	ND	330	36							
2-Nitroaniline	ND	1600	43							
2-Nitrophenol	ND	330	45							
3,3´-Dichlorobenzidine	ND	660	280							
3-Nitroaniline	ND	1600	49							
4,6-Dinitro-2-methyphenol	ND	1600	41							
4-Bromophenyl-phenylether	ND	330	64							
4-Chloro-3-methylphenol	ND	660	71							
4-Chloroaniline	ND	660	53							
4-Chlorophenyl-phenylether	ND	330	33							
4-Methylphenol	ND	330	57							
4-Nitroaniline	ND	1600	37							
4-Nitrophenol	ND	330	64							
Acenaphthene	ND	330	43							
Acenaphthylene	ND	330	62							
Anthracene	ND	330	51							
Benzidine (M)	ND	1600	1400							
Benzo(a)anthracene	ND	330	44							
Benzo(a)pyrene	ND	330	64							
Benzo(b)fluoranthene	ND	330	65							
Benzo(g,h,i)perylene	ND	330	81							
Benzo(k)fluoranthene	ND	330	33							
Benzoic acid	ND	1600	890							
Benzyl alcohol	ND	660	32							
bis(2-chloroethoxy)methane	ND	330	64							
bis(2-Chloroethyl)ether	ND	330	66							
bis(2-chloroisopropyl)ether	ND	330	76							
bis(2-ethylhexyl)phthalate	ND	330	63							
Butylbenzylphthalate	ND	330	41							
Chrysene	ND	330	84							
Di-n-butylphthalate	ND	330	51							

Certificate of Analysis

GSI Environmental, Inc.	Project Number : SATI / 6013
19200 Von Karman Ave., Suite 800	Report To : Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612	Reported : 04/07/2022

Semivolatile Organic Compounds by EPA 8270C - Quality Control (cont'd)

Analyte	Result (ug/kg wet)	PQL (ug/kg wet)	MDL (ug/kg wet)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B2B0900 - MSSEMI_NAL (continued)										
Blank (B2B0900-BLK1) - Continued						Prepared: 2/7/2022 Analyzed: 2/7/2022				
Di-n-octylphthalate	ND	330	63							
Dibenz(a,h)anthracene	ND	330	45							
Dibenzofuran	ND	330	58							
Diethyl phthalate	ND	330	58							
Dimethyl phthalate	ND	330	40							
Fluoranthene	ND	330	60							
Fluorene	ND	330	110							
Hexachlorobenzene	ND	330	55							
Hexachlorobutadiene	ND	660	53							
Hexachlorocyclopentadiene	ND	660	70							
Hexachloroethane	ND	330	94							
Indeno(1,2,3-cd)pyrene	ND	330	75							
Isophorone	ND	330	85							
N-Nitroso-di-n propylamine	ND	330	60							
N-Nitrosodiphenylamine	ND	330	32							
Naphthalene	ND	330	56							
Nitrobenzene	ND	330	57							
Pentachlorophenol	ND	1600	50							
Phenanthrene	ND	330	67							
Phenol	ND	330	34							
Pyrene	ND	330	72							
Pyridine	ND	1600	270							
Surrogate: 1,2-Dichlorobenzene-d4	*2878*			*6666.67*		*43.2*	*23 - 102*			
Surrogate: 2,4,6-Tribromophenol	*3820*			*10000.0*		*38.2*	*3 - 138*			
Surrogate: 2-Chlorophenol-d4	*4334*			*10000.0*		*43.3*	*18 - 105*			
Surrogate: 2-Fluorobiphenyl	*3145*			*6666.67*		*47.2*	*34 - 106*			
Surrogate: 2-Fluorophenol	*4074*			*10000.0*		*40.7*	*16 - 94*			
Surrogate: 4-Terphenyl-d14	*3241*			*6666.67*		*48.6*	*31 - 130*			
Surrogate: Nitrobenzene-d5	*2829*			*6666.67*		*42.4*	*23 - 102*			
Surrogate: Phenol-d6	*4321*			*10000.0*		*43.2*	*14 - 104*			
LCS (B2B0900-BS1)						Prepared: 2/7/2022 Analyzed: 2/7/2022				
1,2,4-Trichlorobenzene	4413.33	330	50	6666.67		66.2	41 - 104			
1,2-Dichlorobenzene	3954.00	330	26	6666.67		59.3	37 - 100			
1,3-Dichlorobenzene	3882.67	330	27	6666.67		58.2	36 - 98			
1,4-Dichlorobenzene	3973.33	330	27	6666.67		59.6	37 - 97			
2,4,5-Trichlorophenol	5508.00	330	30	6666.67		82.6	47 - 115			
2,4,6-Trichlorophenol	5359.33	330	35	6666.67		80.4	48 - 119			
2,4-Dichlorophenol	4687.33	1600	34	6666.67		70.3	46 - 118			
2,4-Dimethylphenol	4784.67	330	26	6666.67		71.8	41 - 114			
2,4-Dinitrophenol	4386.67	1600	86	6666.67		65.8	0 - 180			
2,4-Dinitrotoluene	6042.00	330	33	6666.67		90.6	40 - 138			
2,6-Dinitrotoluene	5592.67	330	49	6666.67		83.9	45 - 131			
2-Chloronaphthalene	5088.67	330	28	6666.67		76.3	46 - 112			
2-Chlorophenol	4010.67	330	31	6666.67		60.2	41 - 99			

Certificate of Analysis

GSI Environmental, Inc.	Project Number : SATI / 6013
19200 Von Karman Ave., Suite 800	Report To : Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612	Reported : 04/07/2022

Semivolatile Organic Compounds by EPA 8270C - Quality Control (cont'd)

Analyte	Result (ug/kg wet)	PQL (ug/kg wet)	MDL (ug/kg wet)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B2B0900 - MSSEMI_NAL (continued)										
LCS (B2B0900-BS1) - Continued						Prepared: 2/7/2022 Analyzed: 2/7/2022				
2-Methylnaphthalene	4698.00	330	27	6666.67		70.5	45 - 111			
2-Methylphenol	4190.67	330	36	6666.67		62.9	40 - 92			
2-Nitroaniline	5482.67	1600	43	6666.67		82.2	44 - 130			
2-Nitrophenol	4444.67	330	45	6666.67		66.7	34 - 114			
3,3´-Dichlorobenzidine	4612.67	660	280	6666.67		69.2	41 - 128			
3-Nitroaniline	5753.33	1600	49	6666.67		86.3	47 - 123			
4,6-Dinitro-2-methyphenol	5350.67	1600	41	6666.67		80.3	2 - 172			
4-Bromophenyl-phenylether	5551.33	330	64	6666.67		83.3	49 - 116			
4-Chloro-3-methylphenol	5191.33	660	71	6666.67		77.9	45 - 127			
4-Chloroaniline	4809.33	660	53	6666.67		72.1	50 - 106			
4-Chlorophenyl-phenylether	5690.67	330	33	6666.67		85.4	49 - 115			
4-Methylphenol	2244.67	330	57	3333.33		67.3	43 - 109			
4-Nitroaniline	5754.67	1600	37	6666.67		86.3	44 - 125			
4-Nitrophenol	5390.67	330	64	6666.67		80.9	30 - 146			
Acenaphthene	5325.33	330	43	6666.67		79.9	44 - 110			
Acenaphthylene	5536.00	330	62	6666.67		83.0	42 - 111			
Anthracene	5807.33	330	51	6666.67		87.1	41 - 117			
Benzidine (M)	3444.00	1600	1400	6666.67		51.7	0 - 189			
Benzo(a)anthracene	5882.67	330	44	6666.67		88.2	45 - 110			
Benzo(a)pyrene	6551.33	330	64	6666.67		98.3	45 - 116			
Benzo(b)fluoranthene	6346.00	330	65	6666.67		95.2	43 - 112			
Benzo(g,h,i)perylene	5565.33	330	81	6666.67		83.5	43 - 113			
Benzo(k)fluoranthene	5832.00	330	33	6666.67		87.5	42 - 114			
Benzoic acid	ND	1600	890	6666.67		NR	0 - 134			
Benzyl alcohol	4298.67	660	32	6666.67		64.5	39 - 117			
bis(2-chloroethoxy)methane	4466.67	330	64	6666.67		67.0	43 - 102			
bis(2-Chloroethyl)ether	3892.00	330	66	6666.67		58.4	38 - 99			
bis(2-chloroisopropyl)ether	3513.33	330	76	6666.67		52.7	30 - 104			
bis(2-ethylhexyl)phthalate	5389.33	330	63	6666.67		80.8	49 - 123			
Butylbenzylphthalate	5440.00	330	41	6666.67		81.6	49 - 122			
Chrysene	5825.33	330	84	6666.67		87.4	46 - 111			
Di-n-butylphthalate	5790.00	330	51	6666.67		86.8	48 - 118			
Di-n-octylphthalate	6060.00	330	63	6666.67		90.9	46 - 131			
Dibenz(a,h)anthracene	5707.33	330	45	6666.67		85.6	43 - 113			
Dibenzofuran	5463.33	330	58	6666.67		81.9	50 - 113			
Diethyl phthalate	5755.33	330	58	6666.67		86.3	50 - 115			
Dimethyl phthalate	5646.67	330	40	6666.67		84.7	48 - 112			
Fluoranthene	6291.33	330	60	6666.67		94.4	40 - 119			
Fluorene	5598.00	330	110	6666.67		84.0	41 - 117			
Hexachlorobenzene	5808.67	330	55	6666.67		87.1	46 - 123			
Hexachlorobutadiene	4218.67	660	53	6666.67		63.3	37 - 104			
Hexachlorocyclopentadiene	4575.33	660	70	6666.67		68.6	30 - 128			
Hexachloroethane	3827.33	330	94	6666.67		57.4	38 - 103			
Indeno(1,2,3-cd)pyrene	5644.00	330	75	6666.67		84.7	43 - 113			
Isophorone	4768.00	330	85	6666.67		71.5	43 - 109			

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612		Reported :	04/07/2022

Semivolatile Organic Compounds by EPA 8270C - Quality Control (cont'd)

Analyte	Result (ug/kg wet)	PQL (ug/kg wet)	MDL (ug/kg wet)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B2B0900 - MSSEMI_NAL (continued)										
LCS (B2B0900-BS1) - Continued						Prepared: 2/7/2022 Analyzed: 2/7/2022				
N-Nitroso-di-n propylamine	4422.67	330	60	6666.67		66.3	44 - 111			
N-Nitrosodiphenylamine	5080.67	330	32	6666.67		76.2	48 - 113			
Naphthalene	4419.33	330	56	6666.67		66.3	38 - 103			
Nitrobenzene	4213.33	330	57	6666.67		63.2	40 - 111			
Pentachlorophenol	4917.33	1600	50	6666.67		73.8	33 - 130			
Phenanthrene	5790.00	330	67	6666.67		86.8	42 - 119			
Phenol	4120.67	330	34	6666.67		61.8	43 - 104			
Pyrene	6445.33	330	72	6666.67		96.7	38 - 120			
Pyridine	1880.00	1600	270	6666.67		28.2	0 - 72			
Surrogate: 1,2-Dichlorobenzene-d4	*3921*			*6666.67*		*58.8*	*23 - 102*			
Surrogate: 2,4,6-Tribromophenol	*9577*			*10000.0*		*95.8*	*3 - 138*			
Surrogate: 2-Chlorophenol-d4	*6073*			*10000.0*		*60.7*	*18 - 105*			
Surrogate: 2-Fluorobiphenyl	*5064*			*6666.67*		*76.0*	*34 - 106*			
Surrogate: 2-Fluorophenol	*5621*			*10000.0*		*56.2*	*16 - 94*			
Surrogate: 4-Terphenyl-d14	*5437*			*6666.67*		*81.6*	*31 - 130*			
Surrogate: Nitrobenzene-d5	*4226*			*6666.67*		*63.4*	*23 - 102*			
Surrogate: Phenol-d6	*6170*			*10000.0*		*61.7*	*14 - 104*			

GSI ENVIRONMENTAL

CHAIN-OF-CUSTODY RECORD
Date: 2/4/2022
Page 1 of 1

2200136

32°C

FROM: GSI Environmental Inc. 2211 Norfolk Suite 1000 Houston, Texas 77098 713 522 6300	PROJECT NAME: SATI
	PROJECT CONTACT: BIANCA MINTZ
	GLOBAL ID:
	PROJECT NO.: 6013
	LAB CONTACT: CHRISTINE Caballero
	SAMPLER(S): (PRINT) Jerry Ngo
TEL:	E-MAIL: bgmintz@gsi-net.com; tfwood@gsi-net.com
LABORATORY: ATL	
TURNAROUND TIME: ☐ SAME DAY ☑ 24 HR ☐ 48 HR ☐ 72 HR ☐ 5 DAYS ☐ STANDARD	
SPECIAL INSTRUCTIONS: Run: Metals, Cr6, PCBs, PAHs, TPH. Hold: Dioxins, phthalates, PBDE, & particle size until further notice	

REQUESTED ANALYSES
Please check box or fill in blank as needed.

LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	Unpreserved	Preserved	Field Filtered	Metals	Cr6	PCBs	PAHs	TPH	Dioxins	phthalates	PBDE	Particle size
1	Sample 12	2/4/22	1320	Soil	6	X			X	X	X	X	X	X	X	X	X
2	Sample 13	2/4/22	1325	Soil	6	X			X	X	X	X	X	X	X	X	X

Relinquished by: (Signature) [signature] 2/4/22 1533	Received by: (Signature) [signature]	Date: 2/4/22	Time: 15:33
Relinquished by: (Signature) [signature] 2/4/22 16:00	Received by: (Signature) Ethan Tran	Date: 2/4/22	Time: 16:00
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:

Christine Caballero (christine.caballero@atlglobal.com)

From: Bianca G Mintz <bgmintz@gsi-net.com>
Sent: Friday, February 4, 2022 7:23 PM
To: Christine Caballero (christine.caballero@atlglobal.com); Victoria Michel
Cc: Gao Martell; Timothy Wood; Robert Scofield; Kenia Whitehead; Vincent Robino
Subject: RE: Percent Moisture Needed_ ATL WO#2200136_Sample Collected on 2/4/22

Hi Christine,

Thank you for catching this. Yes, we would like to keep the reporting consistent. Please add percent moisture, per your recommendation.

Best,

Bianca

From: Christine Caballero (christine.caballero@atlglobal.com) <christine.caballero@atlglobal.com>
Sent: Friday, February 4, 2022 7:13 PM
To: Bianca G Mintz <bgmintz@gsi-net.com>; Victoria Michel <Victoria.Michel@atlglobal.com>
Cc: Gao Martell <GMartell@gsi-net.com>; Timothy Wood <tfwood@gsi-net.com>; Robert Scofield <rscofield@gsi-net.com>; Kenia Whitehead <kwhitehead@gsi-net.com>; Vincent Robino <vprobino@gsi-net.com>
Subject: Percent Moisture Needed_ ATL WO#2200136_Sample Collected on 2/4/22
Importance: High

Good Evening Bianca,

We received the samples. In reviewing the COCs comparing with past WO, percent moisture was not requested on the samples submitted today. Please see attached COC for your reference.

Data reported in the past was based on dry weight, thus percent moisture was needed. If you would like to keep the reporting consistent, I think we should add percent moisture to this WO as well, but I want to confirm this with you.

Please let me know at your earliest convenience, as this is a rush WO.

Thank you for your attention.

Please Note, Our Legal Name is Environmental Treatment & Technology, Inc dba Advanced Technology Laboratories – The "Original ATL" Since 1978!
!

KIND REGARDS, !
!

!
!
Christine Caballero!
!
CUSTOMER RELATIONS MANAGER!
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From: Bianca G Mintz <bgmintz@gsi-net.com>
Sent: Friday, February 4, 2022 2:30 PM
To: Victoria Michel <Victoria.Michel@atlglobal.com>; Christine Caballero (christine.caballero@atlglobal.com) <christine.caballero@atlglobal.com>
Cc: Gao Martell <GMartell@gsi-net.com>; Timothy Wood <tfwood@gsi-net.com>; Robert Scofield <rscofield@gsi-net.com>; Kenia Whitehead <kwhitehead@gsi-net.com>
Subject: RE: Pickup ETA

Thank you, Victoria.

We collected two samples today (Sample 12 and Sample 13). We want to run metals, Cr6, PCBs, PAHs, and TPH for now. We want to hold, dioxins, phthalates, PBDE, and particle size for now and possibly run those later. COC is with the samples.

Give me call if you would like to discuss.

Best,

Bianca

From: Victoria Michel <Victoria.Michel@atlglobal.com>
Sent: Friday, February 4, 2022 2:23 PM
To: Bianca G Mintz <bgmintz@gsi-net.com>; Christine Caballero (christine.caballero@atlglobal.com) <christine.caballero@atlglobal.com>
Subject: RE: Pickup ETA

Good Afternoon Bianca,

Our courier is on his way over.

Please let me know if I can further assist you.

PLEASE NOTE: Our legal name is Environmental Treatment & Technology Inc., dba Advanced Technology Laboratories.

Best regards,

Victoria Michel | Project Assistant
ADVANCED TECHNOLOGY LABORATORIES
3275 Walnut Avenue, Signal Hill CA 90755 | www.atlglobal.com
Tel: 562.989.4045 ext. 238 | Fax: 562.989.6348
Laboratory Excellence Defined

Advanced Technology Laboratories is a full-service environmental lab providing organic and inorganic analyses of soil, water, wastewater, storm water and hazardous waste samples. ATL is accredited by the State of California, Oregon (NELAP), and DoD (Mobile Lab, EPA 8260 Modified) and holds various SBE, DBE and MBE certificates and a USDA soil permit. ATL takes pride in providing our customers with quick turnaround time, excellent customer service and defensible data while offering very competitive rates.

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From: Bianca G Mintz <bgmintz@gsi-net.com>
Sent: Thursday, February 3, 2022 3:26 PM
To: Victoria Michel <Victoria.Michel@atlglobal.com>; Christine Caballero (christine.caballero@atlglobal.com) <christine.caballero@atlglobal.com>
Subject: RE: Pickup ETA

Between 2:00 and 2:30pm will work best.

Best,

Bianca

From: Victoria Michel <Victoria.Michel@atlglobal.com>
Sent: Thursday, February 3, 2022 3:15 PM
To: Bianca G Mintz <bgmintz@gsi-net.com>; Christine Caballero (christine.caballero@atlglobal.com) <christine.caballero@atlglobal.com>
Subject: RE: Pickup ETA

Hi Bianca,

Did you have a preferred time tomorrow for the drop off/ pickup?

PLEASE NOTE: Our legal name is Environmental Treatment & Technology Inc., dba Advanced Technology Laboratories.

Best regards,

Victoria Michel | Project Assistant
ADVANCED TECHNOLOGY LABORATORIES
3275 Walnut Avenue, Signal Hill CA 90755 | www.atlglobal.com
Tel: 562.989.4045 ext. 238 | Fax: 562.989.6348
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Advanced Technology Laboratories is a full-service environmental lab providing organic and inorganic analyses of soil, water, wastewater, storm water and hazardous waste samples. ATL is accredited by the State of California, Oregon (NELAP), and DoD (Mobile Lab, EPA 8260 Modified) and holds various SBE, DBE and MBE certificates and a USDA soil permit. ATL takes pride in providing our customers with quick turnaround time, excellent customer service and defensible data while offering very competitive rates.

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From: Bianca G Mintz <bgmintz@gsi-net.com>
Sent: Thursday, February 3, 2022 3:10 PM
To: Christine Caballero (christine.caballero@atlglobal.com) <christine.caballero@atlglobal.com>
Cc: Victoria Michel <Victoria.Michel@atlglobal.com>
Subject: RE: Pickup ETA

Correct! Rescheduled for tomorrow.

From: Christine Caballero (christine.caballero@atlglobal.com) <christine.caballero@atlglobal.com>
Sent: Thursday, February 3, 2022 3:10 PM
To: Bianca G Mintz <bgmintz@gsi-net.com>
Cc: Victoria Michel <Victoria.Michel@atlglobal.com>
Subject: RE: Pickup ETA
Importance: High

Hi Bianca,

To confirm, the drop-off/pick-up will be canceled today?

Please Note, Our Legal Name is Environmental Treatment & Technology, Inc dba Advanced Technology Laboratories – The "Original ATL" Since 1978 !
!

KIND REGARDS, !
!

!
!
Christine Caballero !
!
CUSTOMER RELATIONS MANAGER !
ADVANCED TECHNOLOGY LABORATORIES !

Tel: +1-562-989-4045 ext. 278!
*Cell: +1-949-293-8904!
Fax: +1-562-989-4040!
!

Global Headquarters:!
3275 Walnut Ave.!
Signal Hill, Ca!
90755!
!
!
We are what we repeatedly do. Excellence, therefore, is not an act, but a habit . . .!
!
!
!

From: Bianca G Mintz <bgmintz@gsi-net.com>
Sent: Thursday, February 3, 2022 3:08 PM
To: Christine Caballero (christine.caballero@atlglobal.com) <christine.caballero@atlglobal.com>
Cc: Victoria Michel <Victoria.Michel@atlglobal.com>
Subject: RE: Pickup ETA

Hi Christine,

Change of plans per usual. We will be collecting samples tomorrow!

If it is easier the empty jars can be dropped off tomorrow during sample pick up.

Best,

Bianca

From: Christine Caballero (christine.caballero@atlglobal.com) <christine.caballero@atlglobal.com>
Sent: Thursday, February 3, 2022 1:58 PM
To: Bianca G Mintz <bgmintz@gsi-net.com>
Cc: Victoria Michel <Victoria.Michel@atlglobal.com>
Subject: Pickup ETA

Hi Bianca,

Thank you for your call. The ETA for your pick-up/drop-off today is around 4pm.

Thank you,

Please Note, Our Legal Name is Environmental Treatment & Technology, Inc dba Advanced Technology Laboratories – The "Original ATL" Since 1978 !
!

KIND REGARDS, !
!

!
!
Christine Caballero !
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CUSTOMER RELATIONS MANAGER !
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TEL: +1-562-989-4045 EXT. 278 !
*CELL: +1-949-293-8904 !
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!
!

CERES Analytical Laboratory, Inc.
4919 Windplay Dr. Suite 1, El Dorado Hills, CA 95762

March 16, 2022 Ceres ID: 15080

Advanced Technology Laboratories
3275 Walnut Avenue
Signal Hill, CA 90755

The following report contains the results for the two soil samples received on March 7, 2022. These samples were analyzed for tetra through octa chlorinated dioxins and dibenzofurans by EPA method 8290. Routine turn-around time was provided for this work.

These samples were received past EPA method 8290 hold time. Sample results are reported on a dry weight basis.

This work was authorized under Advanced Technology Laboratories' Work Order # 2200136 and P.O. # SC16068.

Continuing Calibration Verification (CCV) Requirements
All associated calibration verification standard(s) (CCV) met the acceptance criteria.

The report consists of a Cover Letter, Sample Inventory (Section I), Data Summary (Section II), Sample Tracking (Section VI), and Qualifiers/Abbreviations (Section VII). Raw Data (Section III), Continuing Calibration (Section IV), and Initial Calibration (Section V) are available in a full report (.pdf format) upon request.

If you have any questions regarding this report, please feel free to contact me at (916)932-5011.

Sincerely,

James M. Hedin
Director of Operations/CEO
jhedin@ceres-lab.com

Section I: Sample Inventory

Ceres Sample ID:	Sample ID	Date Received	Collection Date	&Time
15080-001	Sample 12 2200136-01	3/7/2022	2/4/2022	13:20
15080-002	Sample 13 2200136-02	3/7/2022	2/4/2022	13:25

Section II: Data Summary

CERES Analytical Laboratory, Inc.
4919 Windplay Dr.Suite 1, El Dorado Hills, CA 95762

EPA Method 8290A

Quality Assurance Sample **Method Blank** **Project ID:** 2200136	**QC Batch #:** 2594 **Matrix:** Soil **Sample Size:** 10.00 g	**Date Received:** NA **Date Extracted:** 3/14/2022 **Date Analyzed:** 3/15/2022

Analyte	Conc. (pg/g)	MDL	RL	Qual.	Labeled Standards	% R	LCL-UCL (a)	Qualifiers
2,3,7,8-TCDD	DL= 0.426	0.172	0.500		13C-2378-TCDD	80.1	40-135	
12378-PeCDD	DL= 2.06	0.327	2.50		13C-12378-PeCDD	70.5	40-135	
123478-HxCDD	DL= 2.05	0.327	2.50		13C-123478-HxCDD	89.9	40-135	
123678-HxCDD	DL= 2.31	0.655	2.50		13C-123678-HxCDD	87.5	40-135	
123789-HxCDD	DL= 2.05	0.315	2.50		13C-1234678-HpCDD	78.4	40-135	
1234678-HpCDD	DL= 1.85	0.409	2.50		13C-OCDD	85.8	40-135	
OCDD	DL= 3.21	1.01	5.00		13C-2378-TCDF	80.6	40-135	
2,3,7,8-TCDF	DL= 0.433	0.0886	0.500		13C-12378-PeCDF	76.6	40-135	
12378-PeCDF	DL= 1.25	0.412	2.50		13C-23478-PeCDF	74.9	40-135	
23478-PeCDF	DL= 1.26	0.422	2.50		13C-123478-HxCDF	94.4	40-135	
123478-HxCDF	DL= 0.724	0.518	2.50		13C-123678-HxCDF	112	40-135	
123678-HxCDF	DL= 0.617	0.533	2.50		13C-234678-HxCDF	102	40-135	
234678-HxCDF	DL= 0.723	0.319	2.50		13C-123789-HxCDF	96.7	40-135	
123789-HxCDF	DL= 0.721	0.425	2.50		13C-1234678-HpCDF	92.8	40-135	
1234678-HpCDF	DL= 1.21	0.279	2.50		13C-1234789-HpCDF	93.0	40-135	
1234789-HpCDF	DL= 1.67	0.378	2.50					
OCDF	DL= 1.63	0.461	5.00					

Totals	Conc. (pg/g)	EMPC
Total TCDD	DL= 0.426	
Total PeCDD	DL= 2.06	
Total HxCDD	DL= 2.31	
Total HpCDD	DL= 1.85	
Total TCDF	DL= 0.433	
Total PeCDF	DL= 1.26	
Total HxCDF	DL= 0.724	
Total HpCDF	DL= 1.67	

CRS		
37Cl4-2378-TCDD	104	40-135

DL - Signifies Non-Detect (ND<) sample specific detection limit.
EMPC - Estimated Maximum Possible Concentration due to ion abundance ratio failure.
(a) - Lower control limit - Upper control limit
(b) - TEQ based on (2005) World Health Organization (WHO) Toxic Equivalent Factors.

Total Toxic Equivalency (TEQ min.) (b)**:** 0.0 pg/g

Analyst: JMH **Reviewed by: BS**

CERES Analytical Laboratory, Inc.
4919 Windplay Dr.Suite 1, El Dorado Hills, CA 95762

EPA Method 8290A

Quality Assurance Samples Laboratory Control Samples		Date Received: NA
	QC Batch #: 2594	Date Extracted: 3/14/2022
	Matrix: Soil	Date Analyzed: 3/15/2022
Project ID: 2200136	Sample Size: 10.00 g	

Analyte	LCS1 % Rec.	LCS2 % Rec.	%RSD	Labeled Standards	LCS1 % Rec.	LCS2 % Rec	Limits (a)
2,3,7,8-TCDD	84.8	88.1	2.70	13C-2378-TCDD	78.9	80.9	40-135
12378-PeCDD	88.8	90.2	1.11	13C-12378-PeCDD	87.2	76.2	40-135
123478-HxCDD	111	104	4.60	13C-123478-HxCDD	97.6	98.2	40-135
123678-HxCDD	109	107	1.31	13C-123678-HxCDD	98.0	96.3	40-135
123789-HxCDD	104	103	0.683	13C-1234678-HpCDD	84.7	87.1	40-135
1234678-HpCDD	93.8	95.8	1.49	13C-OCDD	90.7	82.5	40-135
OCDD	93	89	3.11	13C-2378-TCDF	81.9	84.9	40-135
2,3,7,8-TCDF	94.1	82.8	9.03	13C-12378-PeCDF	82.9	84.5	40-135
12378-PeCDF	94.6	93.2	1.05	13C-23478-PeCDF	83.0	81.3	40-135
23478-PeCDF	97	96.8	0.146	13C-123478-HxCDF	103	106	40-135
123478-HxCDF	110	107	1.96	13C-123678-HxCDF	123	122	40-135
123678-HxCDF	94	101	5.08	13C-234678-HxCDF	114	113	40-135
234678-HxCDF	105	112	4.56	13C-123789-HxCDF	106	110	40-135
123789-HxCDF	118	101	11.0	13C-1234678-HpCDF	101	103	40-135
1234678-HpCDF	96.6	92	3.45	13C-1234789-HpCDF	105	108	40-135
1234789-HpCDF	96.4	87	7.25				
OCDF	103	107	2.69				
				CRS			
				37Cl4-2378-TCDD	114	120	40-135

(a) Limits based on method acceptance criteria.

Analyst: JMH **Reviewed by: BS**

CERES Analytical Laboratory, Inc.
4919 Windplay Dr.Suite 1, El Dorado Hills, CA 95762

EPA Method 8290A

Client Sample ID: Sample 12 / 2200136-01					
Project ID: 2200136	**Ceres Sample ID:** 15080-001			**Date Received:** 3/7/2022	
	QC Batch #: 2594			**Date Extracted:** 3/14/2022	
Date Collected: 2/4/2022	**Matrix:** Soil			**Date Analyzed:** 3/15/2022	
Time Collected: 13:20	**Sample Size:** 13.04 g	**% Solids:** 77.4			

Analyte	Conc. (pg/g)	MDL	RL	Qual.	Labeled Standards	% R	LCL-UCL (a)	Qualifiers
2,3,7,8-TCDD	1.97	0.172	0.496		13C-2378-TCDD	84.5	40-135	
12378-PeCDD	16.6	0.327	2.48		13C-12378-PeCDD	80.0	40-135	
123478-HxCDD	15.2	0.327	2.48		13C-123478-HxCDD	99.7	40-135	
123678-HxCDD	57.6	0.655	2.48		13C-123678-HxCDD	110	40-135	
123789-HxCDD	36.9	0.315	2.48		13C-1234678-HpCDD	77.6	40-135	
1234678-HpCDD	1,200	0.409	2.48		13C-OCDD	73.0	40-135	
OCDD	9,610	1.01	4.96	E	13C-2378-TCDF	87.6	40-135	
2,3,7,8-TCDF	50.2	0.0886	0.496		13C-12378-PeCDF	106	40-135	
12378-PeCDF	33.9	0.412	2.48		13C-23478-PeCDF	88.5	40-135	
23478-PeCDF	36.6	0.422	2.48		13C-123478-HxCDF	105	40-135	
123478-HxCDF	50.6	0.518	2.48		13C-123678-HxCDF	115	40-135	
123678-HxCDF	49.9	0.533	2.48		13C-234678-HxCDF	115	40-135	
234678-HxCDF	43.7	0.319	2.48		13C-123789-HxCDF	111	40-135	
123789-HxCDF	18.0	0.425	2.48		13C-1234678-HpCDF	88.9	40-135	
1234678-HpCDF	310	0.279	2.48		13C-1234789-HpCDF	97.1	40-135	
1234789-HpCDF	31.6	0.378	2.48					
OCDF	493	0.461	4.96					

Totals	Conc. (pg/g)	EMPC
Total TCDD	65.3	
Total PeCDD	199	
Total HxCDD	690	
Total HpCDD	2,800	
Total TCDF	640	
Total PeCDF	727	
Total HxCDF	689	
Total HpCDF	621	

CRS			
37Cl4-2378-TCDD	123	40-135	

DL - Signifies Non-Detect (ND<) sample specific detection limit.
EMPC - Estimated Maximum Possible Concentration due to ion abundance ratio failure.
(a) - Lower control limit - Upper control limit
(b) - TEQ based on (2005) World Health Organization (WHO) Toxic Equivalent Factors.

Total Toxic Equivalency (TEQ min.) (b)**:** 81.1 pg/g

Analyst: JMH **Reviewed by: BS**

CERES Analytical Laboratory, Inc.
4919 Windplay Dr.Suite 1, El Dorado Hills, CA 95762

EPA Method 8290A

Client Sample ID: Sample 13 / 2200136-02					
Project ID:	2200136	**Ceres Sample ID:**	15080-002	**Date Received:**	3/7/2022
		QC Batch #:	2594	**Date Extracted:**	3/14/2022
Date Collected:	2/4/2022	**Matrix:**	Soil	**Date Analyzed:**	3/15/2022
Time Collected:	13:25	**Sample Size:**	13.40 g **% Solids:** 74.6		

Analyte	Conc. (pg/g)	MDL	RL	Qual.
2,3,7,8-TCDD	6.04	0.172	0.500	
12378-PeCDD	45.8	0.327	2.50	
123478-HxCDD	38.0	0.327	2.50	
123678-HxCDD	120	0.655	2.50	
123789-HxCDD	73.6	0.315	2.50	
1234678-HpCDD	2,180	0.409	2.50	E
OCDD	17,200	1.01	5.00	E
2,3,7,8-TCDF	198	0.0886	0.500	
12378-PeCDF	78.6	0.412	2.50	
23478-PeCDF	145	0.422	2.50	
123478-HxCDF	153	0.518	2.50	
123678-HxCDF	133	0.533	2.50	
234678-HxCDF	146	0.319	2.50	
123789-HxCDF	44.5	0.425	2.50	
1234678-HpCDF	658	0.279	2.50	
1234789-HpCDF	58.3	0.378	2.50	
OCDF	769	0.461	5.00	

Totals	Conc. (pg/g)	EMPC
Total TCDD	241	
Total PeCDD	561	
Total HxCDD	1,380	
Total HpCDD	4,860	
Total TCDF	2,420	
Total PeCDF	2,010	
Total HxCDF	1,530	
Total HpCDF	1,200	

Labeled Standards	% R	LCL-UCL (a)	Qualifiers
13C-2378-TCDD	80.0	40-135	
13C-12378-PeCDD	75.1	40-135	
13C-123478-HxCDD	96.7	40-135	
13C-123678-HxCDD	105	40-135	
13C-1234678-HpCDD	78.5	40-135	
13C-OCDD	75.0	40-135	
13C-2378-TCDF	85.1	40-135	
13C-12378-PeCDF	101	40-135	
13C-23478-PeCDF	82.5	40-135	
13C-123478-HxCDF	108	40-135	
13C-123678-HxCDF	112	40-135	
13C-234678-HxCDF	114	40-135	
13C-123789-HxCDF	115	40-135	
13C-1234678-HpCDF	87.4	40-135	
13C-1234789-HpCDF	105	40-135	
CRS			
37Cl4-2378-TCDD	125	40-135	

DL - Signifies Non-Detect (ND<) sample specific detection limit.
EMPC - Estimated Maximum Possible Concentration due to ion abundance ratio failure.
(a) - Lower control limit - Upper control limit
(b) - TEQ based on (2005) World Health Organization (WHO) Toxic Equivalent Factors.

Total Toxic Equivalency (TEQ min.) (b)**:** 223 pg/g

Analyst: JMH **Reviewed by: BS**

Section VI: Sample Tracking

ADVANCED TECHNOLOGY LABORATORIES

SUBCONTRACT ORDER

Work Order: 2200136

SENDING LABORATORY:

Advanced Technology Laboratories
3275 Walnut Avenue
Signal Hill, CA 90755
Phone: 562.989.4045
Fax: 562.989.6348
Project Manager: Jerald Ancheta
(Jerald.Ancheta@atlglobal.com)
Sampler: _Client Sampler

RECEIVING LABORATORY:

Ceres Analytical Laboratory, Inc.
4919 Windplay Dr., Suite 1
El Dorado Hills, CA 95762
Phone :(916) 932-5011
Fax: (888) 932-5011
PO#: SC16068

IMPORTANT : Please 'J-Flag' results to MDL. Please include Work Order # and PO # in your invoice.

QC Requirements:
- [x] Routine
- [ ] MS/MSD
- [ ] Caltrans
- [ ] Level IV*
- [ ] DUP
- [ ] Other: _____

TAT Requirements:
- [x] Standard
- [ ] Rush _____ Days
- [ ] Fastest Possible

EDD Requirements:
- [ ] Standard Excel
- [ ] Geotracker EDF
- [ ] EQuis
- [ ] Other: _____

* All Level IV sample containers (including empty ones) must be returned to ATL 30 days after receipt.

Analysis	Expires	Sampled	Comments
ATL Lab#: 2200136-01 / Sample 12 8290_Dioxins_Dibenzofurans_SUB [Dioxins and Dibenzofurans]	**Soil** 03/06/22 13:20	**02/04/22 13:20** Glass Jar - 8 oz c	
ATL Lab#: 2200136-02 / Sample 13 8290_Dioxins_Dibenzofurans_SUB [Dioxins and Dibenzofurans]	**Soil** 03/06/22 13:25	**02/04/22 13:25** Glass Jar - 8 oz c	

Prepared by: [signature] 3/4/22
Sample Control Technician — Date

Inspected by: [signature] 3/4/22
PM Lead / SC Lead — Date

Approved by: [signature] 03/04/2022
Dedicated ATL Project Manager — Date

[signature] 3/4/22 16:00
Released By ATL Sample Control — Date — Time

GLS 3/4/22 16:00
Received By Courier — Date — Time

GLS 3/7/22 1320
Released By Courier — Date — Time

[signature] 3/7/22 1320
Received By Subcontract Laboratory — Date — Time

Released By — Date — Time

Received By — Date — Time

C:\PROGRAM FILES (X86)\PROMIUM\ELEMENT\PRINT\SCO_ATL(A.10).NEW.RPT

Sample Receipt Check List Logged by: _____ (initials)

Ceres ID: 15080	Date/Time: 3/7/22 13:20
Client Project ID: 2200136 SC16068	Received Temp: 5.7 °C Acceptable: Y / N
Chain of Custody Relinquished by signed?	Y / N
Chain of Custody Received by signed?	Y / N
Custody Seals? Present?	Y / N
Intact?	Y / N
NA:	NA
Unlabeled / Illegible Samples	Y / N
Proper Containers:	Y / N
Preservation Acceptable (Chemical or Temperature)?	Y / N
Drinking Water, Sodium Thiosulfate present?	Y / N / NA
Residual Cl?	Y / N / NA
Aqueous sample pH: _____	NA

List COC discrepancies:

3/7/22

List Damaged Samples:

3/7/22

Section VII: Qualifiers/Abbreviations

J	Concentration found below the lower quantitation limit but greater than zero.
B	Analyte present in the associated Method Blank.
E	Concentration found exceeds the Calibration range of the HRGC/HRMS.
D	This analyte concentration was calculated from a dilution.
X	The concentration found is the estimated maximum possible concentration due to chlorinated diphenyl ethers present in the sample.
H	Recovery limits exceeded. See cover letter.
*****	Results taken from dilution.
I	Interference. See cover letter.
Conc.	Concentration Found
DL	Calculated Detection Limit
ND	Non-Detect
% Rec.	Percent Recovery

Petroleum Services Division
3437 Landco Dr.
Bakersfield, California 93308
Tel: 661-325-5657
Fax: 661-325-5808
www.corelab.com

March 16, 2022

Jerald Ancheta
Advanced Technology Laboratories
3275 Walnut Ave
Signal Hill, CA 90755

Subject: Laser Particle Size Analysis
Project: 2200136
CL File No: 2201389

Dear Mr. Ancheta,

The attached file presents the final particle size determination results for the two soil samples submitted from your Project #2200136.

Appropriate ASTM, EPA or API methodologies were used for this project and SOP's are available on request. The sample for this project is currently in storage and will be retained for thirty days past completion of testing at no charge. At the end of thirty days, the sample will be disposed. You may contact me regarding continued storage, disposal, or return of the sample.

Thank you for this opportunity to be of service to Advanced Technology Laboratories. Please do not hesitate to contact us at (661-325-5657) if you have any questions regarding these results or if we can be of any additional service.

Sincerely,
Core Laboratories LP

Chris Florence
Sr. Core Analyst

The analyses, opinions or interpretations contained in this report are based upon observations and material supplied by the client for whose exclusive and confidential use this report has been made. The interpretations or opinions expressed represent the best judgment of Core Laboratories. Core Laboratories assumes no responsibility and makes no warranty or representations, expressed or implied, as to the productivity, proper operations or profitableness, however, of any oil, gas, coal or other mineral, property, well or sand in connection with which such report is used or relied upon for any reason whatsoever.

SIEVE and LASER PARTICLE SIZE SUMMARY

(METHODOLOGY: ASTM D422/D4464M)

Petroleum Services

Company: Advanced Technology Laboratories
Project Number: 2200136

CL File No.: 2201389
Date: 3/16/2022

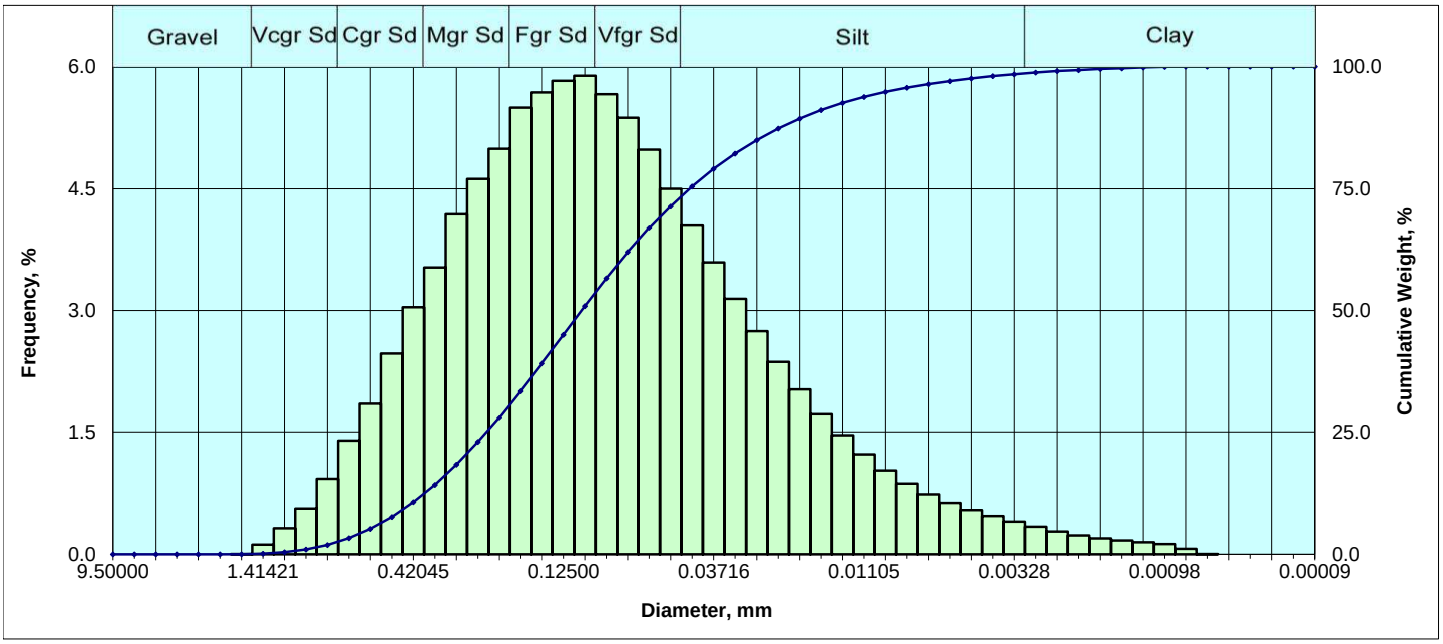
Sample ID	Grain Size Description** (Mean from Folk)	Median Grain Size, mm	Component Percentages								
			Gravel	Sand Size					Silt	Clay	Silt & Clay
				VCoarse	Coarse	Medium	Fine	VFine			
Sample 12	Very Fine Grain Sand	0.1082	0.00	1.00	6.65	15.37	21.99	21.90	31.13	1.96	33.09
Sample 13	Very Fine Grain Sand	0.0693	0.00	0.97	4.60	8.99	15.47	23.53	43.69	2.74	46.44

**Wentworth Scale

Company: Advanced Technology Laboratories
Project Number: 2200136

CL File No.: 2201389
Sample ID: Sample 12

Sieve and Laser Particle Size Analysis



Particle Size Distribution

	Diameter [US Mesh]	Diameter [in.]	Diameter [mm]	Diameter [ϕ]	Weight % [Incl.]	Weight % [Cum.]
Gravel	3/8 in.	0.375000	9.50000	-3.25	0.000	0.00
	1/4 in.	0.250000	6.35000	-2.67	0.000	0.00
	4	0.187008	4.75000	-2.25	0.000	0.00
	6	0.131890	3.35000	-1.75	0.000	0.00
	8	0.092913	2.36000	-1.25	0.000	0.00
	10	0.078740	2.00000	-1.00	0.000	0.00
V Crse Sand	12	0.066212	1.68179	-0.75	0.002	0.00
	14	0.055678	1.41421	-0.50	0.119	0.12
	16	0.046819	1.18921	-0.25	0.320	0.44
	18	0.039370	1.00000	0.00	0.559	1.00
Coarse Sand	20	0.033106	0.84090	0.25	0.926	1.93
	25	0.027839	0.70711	0.50	1.394	3.32
	30	0.023410	0.59460	0.75	1.855	5.18
	35	0.019685	0.50000	1.00	2.474	7.65
Medium Sand	40	0.016553	0.42045	1.25	3.040	10.69
	45	0.013919	0.35355	1.50	3.526	14.21
	50	0.011705	0.29730	1.75	4.188	18.40
	60	0.009843	0.25000	2.00	4.620	23.02
Fine Sand	70	0.008277	0.21022	2.25	4.989	28.01
	80	0.006960	0.17678	2.50	5.494	33.51
	100	0.005852	0.14865	2.75	5.683	39.19
	120	0.004921	0.12500	3.00	5.825	45.01
V. Fine Sand	140	0.004138	0.10511	3.25	5.889	50.90
	170	0.003480	0.08839	3.50	5.660	56.56
	200	0.002926	0.07433	3.75	5.371	61.93
	230	0.002461	0.06250	4.00	4.980	66.91
Silt	270	0.002069	0.05256	4.25	4.501	71.41
	325	0.001740	0.04419	4.50	4.051	75.46
	400	0.001463	0.03716	4.75	3.588	79.05
	450	0.001230	0.03125	5.00	3.143	82.20
	500	0.001035	0.02628	5.25	2.748	84.94
	635	0.000870	0.02210	5.50	2.371	87.31
		0.000732	0.01858	5.75	2.031	89.35
		0.000615	0.01562	6.00	1.730	91.08
		0.000517	0.01314	6.25	1.461	92.54
		0.000435	0.01105	6.50	1.228	93.77
		0.000366	0.00929	6.75	1.031	94.80
		0.000308	0.00781	7.00	0.868	95.66
		0.000259	0.00657	7.25	0.737	96.40
		0.000217	0.00552	7.50	0.631	97.03
		0.000183	0.00465	7.75	0.543	97.57
		0.000154	0.00391	8.00	0.469	98.04
Clay		0.000129	0.00328	8.25	0.401	98.45
		0.000109	0.00276	8.50	0.339	98.78
		0.000091	0.00232	8.75	0.281	99.06
		0.000077	0.00195	9.00	0.231	99.30
		0.000065	0.00164	9.25	0.194	99.49
		0.000054	0.00138	9.50	0.168	99.66
		0.000046	0.00116	9.75	0.147	99.81
		0.000038	0.00098	10.00	0.126	99.93
		0.000032	0.00082	10.25	0.068	100.00
		0.000027	0.00069	10.50	0.000	100.00
		0.000023	0.00058	10.75	0.000	100.00
		0.000019	0.00049	11.00	0.000	100.00
		0.000016	0.00041	11.25	0.000	100.00
		0.000015	0.00038	11.50	0.000	100.00
		0.000003	0.00009	13.50	0.000	100.00

Sorting Statistics (Folk)

Parameter	Trask	Inman	Folk
Median	Very fine sand sized		
(in)	0.0043	0.0043	0.0043
(mm)	0.1082	0.1082	0.1082
Mean	Very fine sand sized		
(in)	0.0055	0.0038	0.0039
(mm)	0.1397	0.0960	0.0999
Sorting	Poor		
	2.278	1.779	1.811
Skewness	Finely skewed		
	0.951	0.312	0.140
Kurtosis	Mesokurtic		
	0.225	0.709	1.049

Component Percentages

Gravel	Sand	Silt	Clay	Silt + Clay
0.00	66.91	31.13	1.96	33.09

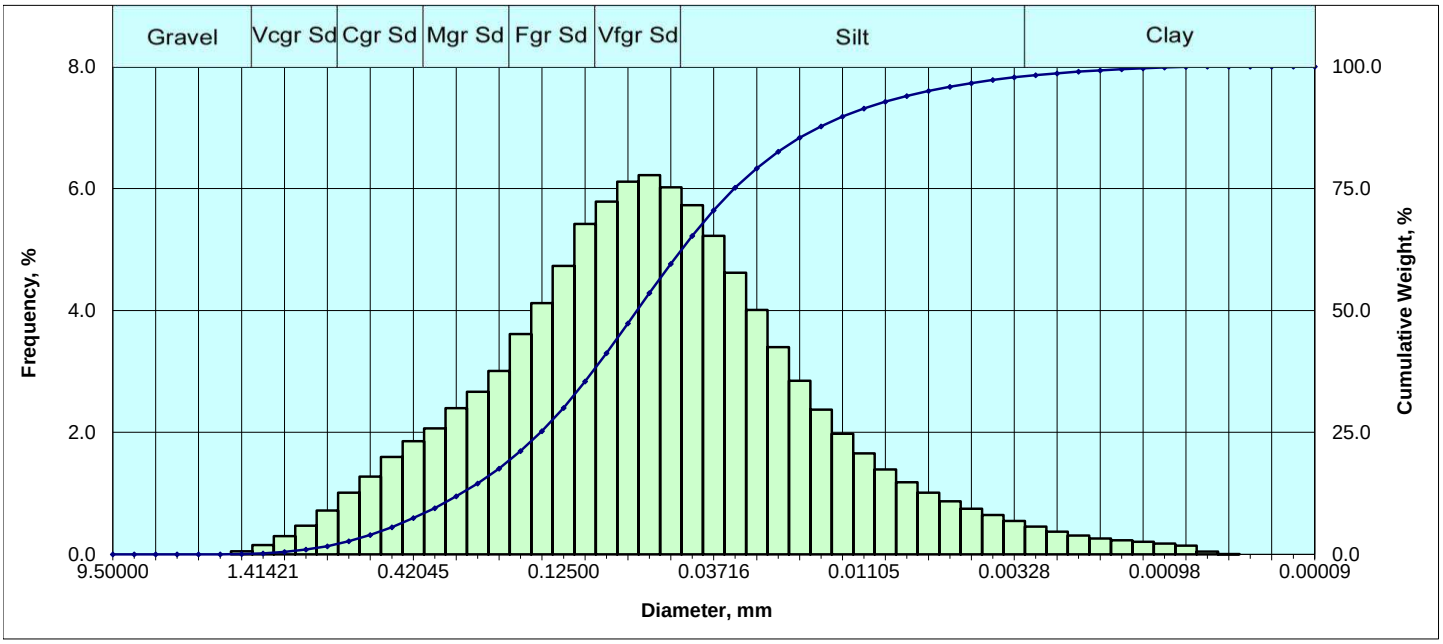
Percentile [Weight, %]	Particle Diameter [in.]	Particle Diameter [mm]	Particle Diameter [phi]
5	0.0238	0.6052	0.7244
10	0.0173	0.4385	1.1895
16	0.0130	0.3296	1.6013
25	0.0092	0.2342	2.0939
40	0.0057	0.1454	2.7823
50	0.0043	0.1082	3.2087
70	0.0022	0.0557	4.1667
75	0.0018	0.0452	4.4690
84	0.0011	0.0280	5.1591
90	0.0007	0.0175	5.8395
95	0.0004	0.0089	6.8048

**All Grain Sizes Classed Using Wentworth Scale

Company: Advanced Technology Laboratories
Project Number: 2200136

CL File No.: 2201389
Sample ID: Sample 13

Sieve and Laser Particle Size Analysis



Particle Size Distribution

	Diameter [US Mesh]	Diameter [in.]	Diameter [mm]	Diameter [ϕ]	Weight % [Incl.]	Weight % [Cum.]
Gravel	3/8 in.	0.375000	9.50000	-3.25	0.000	0.00
	1/4 in.	0.250000	6.35000	-2.67	0.000	0.00
	4	0.187008	4.75000	-2.25	0.000	0.00
	6	0.131890	3.35000	-1.75	0.000	0.00
	8	0.092913	2.36000	-1.25	0.000	0.00
	10	0.078740	2.00000	-1.00	0.000	0.00
V Crse Sand	12	0.066212	1.68179	-0.75	0.051	0.05
	14	0.055678	1.41421	-0.50	0.152	0.20
	16	0.046819	1.18921	-0.25	0.299	0.50
	18	0.039370	1.00000	0.00	0.470	0.97
Coarse Sand	20	0.033106	0.84090	0.25	0.718	1.69
	25	0.027839	0.70711	0.50	1.011	2.70
	30	0.023410	0.59460	0.75	1.274	3.97
	35	0.019685	0.50000	1.00	1.596	5.57
Medium Sand	40	0.016553	0.42045	1.25	1.858	7.43
	45	0.013919	0.35355	1.50	2.068	9.50
	50	0.011705	0.29730	1.75	2.395	11.89
	60	0.009843	0.25000	2.00	2.668	14.56
Fine Sand	70	0.008277	0.21022	2.25	3.006	17.57
	80	0.006960	0.17678	2.50	3.614	21.18
	100	0.005852	0.14865	2.75	4.120	25.30
	120	0.004921	0.12500	3.00	4.730	30.03
V. Fine Sand	140	0.004138	0.10511	3.25	5.417	35.45
	170	0.003480	0.08839	3.50	5.785	41.23
	200	0.002926	0.07433	3.75	6.112	47.34
	230	0.002461	0.06250	4.00	6.219	53.56
Silt	270	0.002069	0.05256	4.25	6.018	59.58
	325	0.001740	0.04419	4.50	5.727	65.31
	400	0.001463	0.03716	4.75	5.224	70.53
	450	0.001230	0.03125	5.00	4.619	75.15
	500	0.001035	0.02628	5.25	4.007	79.16
	635	0.000870	0.02210	5.50	3.396	82.55
		0.000732	0.01858	5.75	2.847	85.40
		0.000615	0.01562	6.00	2.371	87.77
		0.000517	0.01314	6.25	1.978	89.75
		0.000435	0.01105	6.50	1.655	91.40
		0.000366	0.00929	6.75	1.394	92.80
		0.000308	0.00781	7.00	1.182	93.98
		0.000259	0.00657	7.25	1.012	94.99
		0.000217	0.00552	7.50	0.871	95.86
		0.000183	0.00465	7.75	0.750	96.61
		0.000154	0.00391	8.00	0.643	97.26
Clay		0.000129	0.00328	8.25	0.546	97.80
		0.000109	0.00276	8.50	0.456	98.26
		0.000091	0.00232	8.75	0.374	98.63
		0.000077	0.00195	9.00	0.309	98.94
		0.000065	0.00164	9.25	0.260	99.20
		0.000054	0.00138	9.50	0.229	99.43
		0.000046	0.00116	9.75	0.204	99.63
		0.000038	0.00098	10.00	0.179	99.81
		0.000032	0.00082	10.25	0.141	99.95
		0.000027	0.00069	10.50	0.046	100.00
		0.000023	0.00058	10.75	0.000	100.00
		0.000019	0.00049	11.00	0.000	100.00
		0.000016	0.00041	11.25	0.000	100.00
		0.000015	0.00038	11.50	0.000	100.00
		0.000003	0.00009	13.50	0.000	100.00

Sorting Statistics (Folk)

Parameter	Trask	Inman	Folk
Median	Very fine sand sized		
(in)	0.0027	0.0027	0.0027
(mm)	0.0693	0.0693	0.0693
Mean	Very fine sand sized		
(in)	0.0036	0.0027	0.0027
(mm)	0.0911	0.0685	0.0688
Sorting	Poor		
	2.189	1.754	1.838
Skewness	Near symmetrical		
	0.994	0.130	0.040
Kurtosis	Lepokurtic		
	0.181	0.810	1.150

Component Percentages

Gravel	Sand	Silt	Clay	Silt + Clay
0.00	53.56	43.69	2.74	46.44

Percentile [Weight, %]	Particle Diameter [in.]	Particle Diameter [mm]	Particle Diameter [phi]
5	0.0210	0.5338	0.9055
10	0.0135	0.3417	1.5490
16	0.0091	0.2310	2.1143
25	0.0059	0.1507	2.7302
40	0.0036	0.0920	3.4430
50	0.0027	0.0693	3.8515
70	0.0015	0.0379	4.7225
75	0.0012	0.0314	4.9911
84	0.0008	0.0203	5.6216
90	0.0005	0.0128	6.2852
95	0.0003	0.0066	7.2520

**All Grain Sizes Classed Using Wentworth Scale

A

ADVANCED TECHNOLOGY LABORATORIES

SUBCONTRACT ORDER

Work Order: 2200136

SENDING LABORATORY:

Advanced Technology Laboratories
3275 Walnut Avenue
Signal Hill, CA 90755
Phone: 562.989.4045
Fax: 562.989.6348
Project Manager: Jerald Ancheta
(Jerald.Ancheta@atlglobal.com)
Sampler: _Client Sampler

RECEIVING LABORATORY:

Core Laboratories LP
3437 Landco Dr.
Bakersfield, CA 93308
Phone :(661) 325-5657
Fax:
PO#: SC16066

IMPORTANT : Please 'J-Flag' results to MDL. Please include Work Order # and PO # in your invoice.

QC Requirements:
- [x] Routine
- [ ] MS/MSD
- [ ] Caltrans
- [ ] Level IV*
- [ ] DUP
- [ ] Other: _____

TAT Requirements:
- [x] Standard
- [ ] Rush _____ Days
- [ ] Fastest Possible

EDD Requirements:
- [ ] Standard Excel
- [ ] Geotracker EDF
- [ ] EQuis
- [ ] Other: _____

* All Level IV sample containers (including empty ones) must be returned to ATL 30 days after receipt.

Analysis	Expires	Sampled	Comments
ATL Lab#: 2200136-01 / Sample 12 Particle_Size_SUB [Particle Size by Sieve & Laser Methods]	**Soil** 02/18/22 13:20	**02/04/22 13:20** Glass Jar - 8 oz a	
ATL Lab#: 2200136-02 / Sample 13 Particle_Size_SUB [Particle Size by Sieve & Laser Methods]	**Soil** 02/18/22 13:25	**02/04/22 13:25** Glass Jar - 8 oz a	

Prepared by: Tom 3/4/22
Sample Control Technician — Date

Inspected by: [signature] 3/4/22
PM Lead / SC Lead — Date

Approved by: Victoria Urchuf 03/04/2022
Dedicated ATL Project Manager — Date

[signature] 3/4/22 16:00
Released By ATL Sample Control — Date — Time

GLS 3/4/22 16:00
Received By Courier — Date — Time

GLS
Released By Courier — Date — Time

3/4/22 GLS
Received By Subcontract Laboratory — Date — Time

Released By — Date — Time

[signature] 3-8-22
Received By — Date — Time

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WECK LABORATORIES, INC.

Certificate of Analysis

FINAL REPORT

Work Orders:	2C07061	**Report Date:**	4/06/2022
		Received Date:	3/7/2022
Project:	2200136	**Turnaround Time:**	Normal
		Phones:	(562) 989-4045
		Fax:	(562) 989-4040
Attn:	Advanced Technology Labs	**P.O. #:**	
Client:	Advanced Technology Laboratories 3275 Walnut Street Signal Hill, CA 90755	**Billing Code:**	

EPA-UCMR #CA00211 • Guam-EPA #17-008R • LACSD #10143 • NJ-DEP #CA015 • NV-DEP #NAC 445A • SCAQMD #93LA1006

This is a complete final report. The information in this report applies to the samples analyzed in accordance with the chain-of-custody document. Weck Laboratories certifies that the test results meet all requirements of TNI unless noted by qualifiers or written in the Case Narrative. This analytical report must be reproduced in its entirety.

Dear Advanced Technology Labs,

Enclosed are the results of analyses for samples received 3/07/22 with the Chain-of-Custody document. The samples were received in good condition, at 17.6 °C and on ice. All analyses met the method criteria except as noted in the case narrative or in the report with data qualifiers.

Reviewed by:

Rahul R. Nair
Project Manager

14859 Clark Avenue,City of Industry CA, 91745 | Phone: (626) 336-2139 | Fax: (626) 336-2634
www.wecklabs.com

Advanced Technology Laboratories
3275 Walnut Street
Signal Hill, CA 90755

Project Number: 2200136

Project Manager: Advanced Technology Labs

Reported:
04/06/2022 12:43

Sample Summary

Sample Name	Sampled By	Lab ID	Matrix	Sampled	Qualifiers
2200136-01	Client	2C07061-01	Solid	02/04/22 13:20	
2200136-02	Client	2C07061-02	Solid	02/04/22 13:25	

Analyses Accreditation Summary

Analyte	CAS #	Not By NELAP	ANAB ISO 17025
GCMS SIM in Solid			
PBDE-47	5436-43-1	✓	
PBDE-99	60348-60-9	✓	
PBDE-100	189084-64-8	✓	
PBDE-153	68631-49-2	✓	
PBDE-154	207122-15-4	✓	
Perylene-d12	1520-96-3	✓	
Triphenyl phosphate	115-86-6	✓	

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Advanced Technology Laboratories
3275 Walnut Street
Signal Hill, CA 90755

Project Number: 2200136

Project Manager: Advanced Technology Labs

Reported: 04/06/2022 12:43

Sample Results

Sample: 2200136-01 — Sampled: 02/04/22 13:20 by Client

2C07061-01 (Solid)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
PPCPs - Polybrominated Diphenyl Ethers by GC/MS SIM							
Method: GCMS SIM			**Instr:** GCMS06				
Batch ID: W2C0637 — **Preparation:** EPA 3550/Sonication			**Prepared:** 03/09/22 08:46				**Analyst:** rmr
PBDE-100	**660**	430	430	ug/kg	20	03/26/22	M-02, M-04, O-09
PBDE-138	ND	430	430	ug/kg	20	03/26/22	M-02, M-04, O-09
PBDE-153	ND	430	430	ug/kg	20	03/26/22	M-02, M-04, O-09
PBDE-154	ND	430	430	ug/kg	20	03/26/22	M-02, M-04, O-09
PBDE-17	ND	430	430	ug/kg	20	03/26/22	M-02, M-04, O-09
PBDE-28	ND	430	430	ug/kg	20	03/26/22	M-02, M-04, O-09
PBDE-47	ND	430	430	ug/kg	20	03/26/22	M-02, M-04, O-09
PBDE-49	ND	430	430	ug/kg	20	03/26/22	M-02, M-04, O-09
PBDE-85	ND	430	430	ug/kg	20	03/26/22	M-02, M-04, O-09
PBDE-99	ND	430	430	ug/kg	20	03/26/22	M-02, M-04, O-09
Surrogate(s)							
Perylene-d12	*87%*	*Conc: 93.3*	*50-150*			*03/26/22*	*O-09*
Triphenyl phosphate	*292%*	*Conc: 313*	*50-150*			*03/26/22*	*O-09, S-GC*

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Advanced Technology Laboratories
3275 Walnut Street
Signal Hill, CA 90755

Project Number: 2200136

Project Manager: Advanced Technology Labs

Reported: 04/06/2022 12:43

Sample Results

(Continued)

Sample: 2200136-02 — Sampled: 02/04/22 13:25 by Client

2C07061-02 (Solid)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
PPCPs - Polybrominated Diphenyl Ethers by GC/MS SIM							
Method: GCMS SIM			**Instr:** GCMS06				
Batch ID: W2C0637 — **Preparation:** EPA 3550/Sonication			**Prepared:** 03/09/22 08:46				**Analyst:** rmr
PBDE-100	ND	460	460	ug/kg	20	03/26/22	M-02, M-04, O-09
PBDE-138	ND	460	460	ug/kg	20	03/26/22	M-02, M-04, O-09
PBDE-153	ND	460	460	ug/kg	20	03/26/22	M-02, M-04, O-09
PBDE-154	ND	460	460	ug/kg	20	03/26/22	M-02, M-04, O-09
PBDE-17	ND	460	460	ug/kg	20	03/26/22	M-02, M-04, O-09
PBDE-28	ND	460	460	ug/kg	20	03/26/22	M-02, M-04, O-09
PBDE-47	ND	460	460	ug/kg	20	03/26/22	M-02, M-04, O-09
PBDE-49	ND	460	460	ug/kg	20	03/26/22	M-02, M-04, O-09
PBDE-85	ND	460	460	ug/kg	20	03/26/22	M-02, M-04, O-09
PBDE-99	ND	460	460	ug/kg	20	03/26/22	M-02, M-04, O-09
Surrogate(s)							
Perylene-d12	*68%*	*Conc: 77.9*	*50-150*			*03/26/22*	*O-09*
Triphenyl phosphate	*136%*	*Conc: 157*	*50-150*			*03/26/22*	*O-09*

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Advanced Technology Laboratories
3275 Walnut Street
Signal Hill, CA 90755

Project Number: 2200136

Project Manager: Advanced Technology Labs

Reported: 04/06/2022 12:43

Quality Control Results

PPCPs - Polybrominated Diphenyl Ethers by GC/MS SIM

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W2C0637 - GCMS SIM											
Blank (W2C0637-BLK1)					**Prepared: 03/09/22 Analyzed: 03/26/22**						
PBDE-100	ND	2.5	2.5	ug/kg							
PBDE-138	ND	2.5	2.5	ug/kg							
PBDE-153	ND	2.5	2.5	ug/kg							
PBDE-154	ND	2.5	2.5	ug/kg							
PBDE-17	ND	2.5	2.5	ug/kg							
PBDE-28	ND	2.5	2.5	ug/kg							
PBDE-47	ND	2.5	2.5	ug/kg							
PBDE-49	ND	2.5	2.5	ug/kg							
PBDE-85	ND	2.5	2.5	ug/kg							
PBDE-99	ND	2.5	2.5	ug/kg							
Surrogate(s)											
Perylene-d12	*11.0*			*ug/kg*	*12.5*		*88*	*50-150*			
Triphenyl phosphate	*13.1*			*ug/kg*	*12.5*		*105*	*50-150*			
LCS (W2C0637-BS1)					**Prepared: 03/09/22 Analyzed: 03/26/22**						
PBDE-100	3.02	2.5	2.5	ug/kg	2.50		121	50-150			
PBDE-138	2.67	2.5	2.5	ug/kg	2.50		107	50-150			
PBDE-153	2.73	2.5	2.5	ug/kg	2.50		109	50-150			
PBDE-154	2.76	2.5	2.5	ug/kg	2.50		110	50-150			
PBDE-17	2.25	0.0	2.5	ug/kg	2.50		90	50-150			
PBDE-28	2.28	0.0	2.5	ug/kg	2.50		91	50-150			
PBDE-47	2.57	2.5	2.5	ug/kg	2.50		103	50-150			
PBDE-49	2.54	2.5	2.5	ug/kg	2.50		101	50-150			
PBDE-85	2.73	2.5	2.5	ug/kg	2.50		109	50-150			
PBDE-99	2.83	2.5	2.5	ug/kg	2.50		113	50-150			
Surrogate(s)											
Perylene-d12	*13.8*			*ug/kg*	*12.5*		*110*	*50-150*			
Triphenyl phosphate	*14.5*			*ug/kg*	*12.5*		*116*	*50-150*			
Matrix Spike (W2C0637-MS1)	**Source: 2C07061-01**				**Prepared: 03/09/22 Analyzed: 03/26/22**						
PBDE-100	894	460	460	ug/kg	22.8	660	NR	50-150			M-02, M-04, MS-01
PBDE-138	42.1	0.0	460	ug/kg	22.8	10.2	140	50-150			M-02, M-04
PBDE-153	169	0.0	460	ug/kg	22.8	105	280	50-150			M-02, M-04, MS-01
PBDE-154	114	0.0	460	ug/kg	22.8	65.9	209	50-150			M-02, M-04, MS-01
PBDE-17	27.7	0.0	460	ug/kg	22.8	ND	121	50-150			M-02, M-04
PBDE-28	35.9	0.0	460	ug/kg	22.8	7.47	124	50-150			M-02, M-04
PBDE-47	545	460	460	ug/kg	22.8	ND	NR	50-150			M-02, M-04, MS-01

Advanced Technology Laboratories
3275 Walnut Street
Signal Hill, CA 90755

Project Number: 2200136

Project Manager: Advanced Technology Labs

Reported: 04/06/2022 12:43

Quality Control Results

(Continued)

PPCPs - Polybrominated Diphenyl Ethers by GC/MS SIM (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W2C0637 - GCMS SIM (Continued)											
Matrix Spike (W2C0637-MS1)	**Source: 2C07061-01**				**Prepared: 03/09/22**	**Analyzed: 03/26/22**					
PBDE-49	62.9	0.0	460	ug/kg	22.8	47.8	66	50-150			M-02, M-04
PBDE-85	59.8	0.0	460	ug/kg	22.8	24.5	155	50-150			M-02, M-04, MS-01
PBDE-99	183	0.0	460	ug/kg	22.8	120	276	50-150			M-02, M-04, MS-01
Surrogate(s)											
Perylene-d12	*130*			*ug/kg*	*114*		*114*	*50-150*			
Triphenyl phosphate	*544*			*ug/kg*	*114*		*476*	*50-150*			*S-GC*
Matrix Spike Dup (W2C0637-MSD1)	**Source: 2C07061-01**				**Prepared: 03/09/22**	**Analyzed: 03/26/22**					
PBDE-100	754	450	450	ug/kg	22.5	660	418	50-150	17	30	M-02, M-04, MS-01
PBDE-138	33.3	0.0	450	ug/kg	22.5	10.2	103	50-150	200	30	M-02, M-04, R-03
PBDE-153	138	0.0	450	ug/kg	22.5	105	148	50-150	200	30	M-02, M-04, R-03
PBDE-154	97.3	0.0	450	ug/kg	22.5	65.9	139	50-150	200	30	M-02, M-04, R-03
PBDE-17	22.8	0.0	450	ug/kg	22.5	ND	101	50-150	200	30	M-02, M-04, R-03
PBDE-28	28.9	0.0	450	ug/kg	22.5	7.47	95	50-150	200	30	M-02, M-04, R-03
PBDE-47	487	450	450	ug/kg	22.5	ND	NR	50-150	11	30	M-02, M-04, MS-01
PBDE-49	76.2	0.0	450	ug/kg	22.5	47.8	126	50-150	200	30	M-02, M-04, R-03
PBDE-85	46.9	0.0	450	ug/kg	22.5	24.5	100	50-150	200	30	M-02, M-04, R-03
PBDE-99	155	0.0	450	ug/kg	22.5	120	154	50-150	200	30	M-02, M-04, MS-01, R-03
Surrogate(s)											
Perylene-d12	*102*			*ug/kg*	*113*		*90*	*50-150*			
Triphenyl phosphate	*528*			*ug/kg*	*113*		*469*	*50-150*			*S-GC*

14859 Clark Avenue,City of Industry CA, 91745 | Phone: (626) 336-2139 | Fax: (626) 336-2634
www.wecklabs.com

Advanced Technology Laboratories
3275 Walnut Street
Signal Hill, CA 90755

Project Number: 2200136

Project Manager: Advanced Technology Labs

Reported:
04/06/2022 12:43

Notes and Definitions

Item	Definition
M-02	Due to the nature of matrix interferences, sample was diluted prior to preparation. The MDL and MRL were raised due to the dilution.
M-04	Due to the nature of matrix interferences, sample extract was diluted prior to analysis. The MDL and MRL were raised due to the dilution.
MS-01	The spike recovery for this QC sample is outside of established control limits possibly due to sample matrix interference.
O-09	This sample was received with the EPA recommended holding time expired.
R-03	The RPD is not applicable for result below the reporting limit (either ND or J value).
S-GC	Surrogate recovery outside of control limits due to a possible matrix effect . The data was accepted based on valid recovery of the remaining surrogate.
%REC	Percent Recovery
Dil	Dilution
MDL	Method Detection Limit
MRL	The minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. The MRL is also known as Limit of Quantitation (LOQ)
ND	NOT DETECTED at or above the Method Reporting Limit (MRL). If Method Detection Limit (MDL) is reported, then ND means not detected at or above the MDL.
RPD	Relative Percent Difference
Source	Sample that was matrix spiked or duplicated.

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

All results are expressed on wet weight basis unless otherwise specified.

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.

14859 Clark Avenue,City of Industry CA, 91745 | Phone: (626) 336-2139 | Fax: (626) 336-2634

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March 18, 2022

Timothy Wood/ Vinnie Robino/Josh Voss
GSI Environmental, Inc.
19200 Von Karman Ave., Suite 800
Irvine, CA 92612
Tel: (949) 679-1070
Fax:

ELAP No.: 1838
CSDLAC No.: 10196
ORELAP No.: CA300003

Re: ATL Work Order Number : 2200184
Client Reference : SATI / 6013

Enclosed are the results for sample(s) received on February 14, 2022 by Advanced Technology Laboratories. The sample(s) are tested for the parameters as indicated on the enclosed chain of custody in accordance with applicable laboratory certifications. The laboratory results contained in this report specifically pertains to the sample(s) submitted.

Thank you for the opportunity to serve the needs of your company. If you have any questions, please feel free to contact me or Project.Management@atlglobal.com.

Sincerely,

Victoria Michel
for

Victoria Michel, Project Assistant
Victoria.Michel@atlglobal.com
Authorized to Release on 03/18/22 13:54 on Behalf of

Amy Leung
Laboratory Director

The test results in this report relate exclusively to the samples as received by the laboratory, and meet the requirements of the methodology under which they were reported; any exceptions are noted within the report and/ or case narrative.

The cover letter/ signature page and the case narrative are integral parts of this analytical report; the absence of any portion of the report renders the report invalid. This report shall not be reproduced except in full, and shall have the express written approval of the laboratory, and the original client firm to do so

.

The electronic signature on this report is signed by an authorized signatory of Advanced Technology Laboratories, and is intended to be legally binding as the equivalent of a handwritten signature.

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612		Reported :	03/18/2022

SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Sample 14	2200184-01	Soil	2/14/22 12:30	2/14/22 18:15

Certificate of Analysis

GSI Environmental, Inc.	Project Number : SATI / 6013
19200 Von Karman Ave., Suite 800	Report To : Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612	Reported : 03/18/2022

Notes and Definitions

S4	Surrogate was diluted out.
S12	Surrogate recovery outside in-house established limit but within method default criteria.
R	RPD value outside acceptance criteria. Calculation is based on raw values.
M6	Matrix spike analyte was diluted out.
M2	Matrix spike recovery outside of acceptance limit due to possible matrix interference. The analytical batch was validated by the laboratory control sample.
D1	Sample required dilution due to possible matrix interference.
ND	Analyte is not detected at or above the Practical Quantitation Limit (PQL). When client requests quantitation against MDL, analyte is not detected at or above the Method Detection Limit (MDL)
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
NR	Not Reported
RPD	Relative Percent Difference
CA2	CA-ELAP (CDPH)
OR1	OR-NELAP (OSPHL)

Notes:
(1) The reported MDL and PQL are based on prep ratio variation and analytical dilution.
(2) The suffix [2C] of specific analytes signifies that the reported result is taken from the instrument's second column.
(3) Results are wet unless otherwise specified.

Percent Moisture

Analyte: Percent Solids — Analyst: LN

Laboratory ID	Client Sample ID	Result	Units	PQL	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
2200184-01	Sample 14	**100**	% by Weight	0.10	1	B2B1112	02/18/2022	02/18/22 14:00	

Hexavalent Chromium by EPA 7196A/3060A

Analyte: Hexavalent Chromium — Analyst: VJ

Laboratory ID	Client Sample ID	Result	Units	PQL	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
2200184-01	Sample 14	**12**	mg/kg dry	1.0	1	B2B1041	02/15/2022	02/15/22 16:07	

Certificate of Analysis

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19200 Von Karman Ave., Suite 800		Report To :	Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612		Reported :	03/18/2022

Mercury by AA (Cold Vapor) EPA 7471A

Analyte: Mercury **Analyst: AEG**

Laboratory ID	Client Sample ID	Result	Units	PQL	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
2200184-01	Sample 14	**7.3**	mg/kg dry	1.0	10	B2B1034	02/15/2022	02/15/22 16:09	

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612		Reported :	03/18/2022

Client Sample ID: Sample 14
Lab ID: 2200184-01

Title 22 Metals by ICP-AES EPA 6010B

Analyst: WT

Analyte	Result (mg/kg dry)	PQL (mg/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	20	10	B2B1026	02/15/2022	02/16/22 11:46	
Arsenic	**16**	10	10	B2B1026	02/15/2022	02/16/22 11:46	
Barium	**1300**	10	10	B2B1026	02/15/2022	02/16/22 11:46	
Beryllium	ND	10	10	B2B1026	02/15/2022	02/16/22 11:46	
Cadmium	**57**	10	10	B2B1026	02/15/2022	02/16/22 11:46	
Chromium	**380**	10	10	B2B1026	02/15/2022	02/16/22 11:46	
Cobalt	**46**	10	10	B2B1026	02/15/2022	02/16/22 11:46	
Copper	**1100**	20	10	B2B1026	02/15/2022	02/16/22 11:46	
Lead	**1900**	10	10	B2B1026	02/15/2022	02/16/22 11:46	
Molybdenum	**74**	10	10	B2B1026	02/15/2022	02/16/22 11:46	
Nickel	**650**	10	10	B2B1026	02/15/2022	02/16/22 11:46	
Selenium	**76**	10	10	B2B1026	02/15/2022	02/16/22 11:46	
Silver	ND	10	10	B2B1026	02/15/2022	02/16/22 11:46	
Thallium	ND	10	10	B2B1026	02/15/2022	02/16/22 11:46	
Vanadium	**50**	10	10	B2B1026	02/15/2022	02/16/22 11:46	
Zinc	**14000**	10	10	B2B1026	02/15/2022	02/16/22 11:46	

Diesel and Oil Range Organics by EPA 8015B

Analyst: JV

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	ND	100	10	B2B1043	02/15/2022	02/15/22 15:23	D1
ORO	**240**	100	10	B2B1043	02/15/2022	02/15/22 15:23	D1
Surrogate: p-Terphenyl	*37.1 %*	*62 - 141*		B2B1043	02/15/2022	*02/15/22 15:23*	S4

Polychlorinated Biphenyls by EPA 8082

Analyst: KL

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aroclor 1016	ND	160	10	B2B1049	02/15/2022	02/16/22 20:24	
Aroclor 1221	ND	160	10	B2B1049	02/15/2022	02/16/22 20:24	
Aroclor 1232	ND	160	10	B2B1049	02/15/2022	02/16/22 20:24	
Aroclor 1242	**1500**	160	10	B2B1049	02/15/2022	02/16/22 20:24	
Aroclor 1248	ND	160	10	B2B1049	02/15/2022	02/16/22 20:24	
Aroclor 1254	**1500**	160	10	B2B1049	02/15/2022	02/16/22 20:24	
Aroclor 1260	**710**	160	10	B2B1049	02/15/2022	02/16/22 20:24	
Surrogate: Decachlorobiphenyl	*111 %*	*0 - 87*		B2B1049	02/15/2022	*02/16/22 20:24*	S12
Surrogate: Tetrachloro-m-xylene	*43.0 %*	*0 - 103*		B2B1049	02/15/2022	*02/16/22 20:24*	

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612		Reported :	03/18/2022

Client Sample ID: Sample 14
Lab ID: 2200184-01

Semivolatile Organic Compounds by EPA 8270C **Analyst: EB**

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,2,4-Trichlorobenzene	ND	6600	20	B2B1048	02/15/2022	02/16/22 18:27	D1
1,2-Dichlorobenzene	ND	6600	20	B2B1048	02/15/2022	02/16/22 18:27	D1
1,3-Dichlorobenzene	ND	6600	20	B2B1048	02/15/2022	02/16/22 18:27	D1
1,4-Dichlorobenzene	ND	6600	20	B2B1048	02/15/2022	02/16/22 18:27	D1
2,4,5-Trichlorophenol	ND	6600	20	B2B1048	02/15/2022	02/16/22 18:27	D1
2,4,6-Trichlorophenol	ND	6600	20	B2B1048	02/15/2022	02/16/22 18:27	D1
2,4-Dichlorophenol	ND	33000	20	B2B1048	02/15/2022	02/16/22 18:27	D1
2,4-Dimethylphenol	ND	6600	20	B2B1048	02/15/2022	02/16/22 18:27	D1
2,4-Dinitrophenol	ND	33000	20	B2B1048	02/15/2022	02/16/22 18:27	D1
2,4-Dinitrotoluene	ND	6600	20	B2B1048	02/15/2022	02/16/22 18:27	D1
2,6-Dinitrotoluene	ND	6600	20	B2B1048	02/15/2022	02/16/22 18:27	D1
2-Chloronaphthalene	ND	6600	20	B2B1048	02/15/2022	02/16/22 18:27	D1
2-Chlorophenol	ND	6600	20	B2B1048	02/15/2022	02/16/22 18:27	D1
2-Methylnaphthalene	ND	6600	20	B2B1048	02/15/2022	02/16/22 18:27	D1
2-Methylphenol	ND	6600	20	B2B1048	02/15/2022	02/16/22 18:27	D1
2-Nitroaniline	ND	33000	20	B2B1048	02/15/2022	02/16/22 18:27	D1
2-Nitrophenol	ND	6600	20	B2B1048	02/15/2022	02/16/22 18:27	D1
3,3´-Dichlorobenzidine	ND	13000	20	B2B1048	02/15/2022	02/16/22 18:27	D1
3-Nitroaniline	ND	33000	20	B2B1048	02/15/2022	02/16/22 18:27	D1
4,6-Dinitro-2-methyphenol	ND	33000	20	B2B1048	02/15/2022	02/16/22 18:27	D1
4-Bromophenyl-phenylether	ND	6600	20	B2B1048	02/15/2022	02/16/22 18:27	D1
4-Chloro-3-methylphenol	ND	13000	20	B2B1048	02/15/2022	02/16/22 18:27	D1
4-Chloroaniline	ND	13000	20	B2B1048	02/15/2022	02/16/22 18:27	D1
4-Chlorophenyl-phenylether	ND	6600	20	B2B1048	02/15/2022	02/16/22 18:27	D1
4-Methylphenol	ND	6600	20	B2B1048	02/15/2022	02/16/22 18:27	D1
4-Nitroaniline	ND	33000	20	B2B1048	02/15/2022	02/16/22 18:27	D1
4-Nitrophenol	ND	6600	20	B2B1048	02/15/2022	02/16/22 18:27	D1
Acenaphthene	ND	6600	20	B2B1048	02/15/2022	02/16/22 18:27	D1
Acenaphthylene	ND	6600	20	B2B1048	02/15/2022	02/16/22 18:27	D1
Anthracene	ND	6600	20	B2B1048	02/15/2022	02/16/22 18:27	D1
Benzidine (M)	ND	33000	20	B2B1048	02/15/2022	02/16/22 18:27	D1
Benzo(a)anthracene	ND	6600	20	B2B1048	02/15/2022	02/16/22 18:27	D1
Benzo(a)pyrene	ND	6600	20	B2B1048	02/15/2022	02/16/22 18:27	D1
Benzo(b)fluoranthene	ND	6600	20	B2B1048	02/15/2022	02/16/22 18:27	D1
Benzo(g,h,i)perylene	ND	6600	20	B2B1048	02/15/2022	02/16/22 18:27	D1
Benzo(k)fluoranthene	ND	6600	20	B2B1048	02/15/2022	02/16/22 18:27	D1
Benzoic acid	ND	33000	20	B2B1048	02/15/2022	02/16/22 18:27	D1
Benzyl alcohol	ND	13000	20	B2B1048	02/15/2022	02/16/22 18:27	D1
bis(2-chloroethoxy)methane	ND	6600	20	B2B1048	02/15/2022	02/16/22 18:27	D1
bis(2-Chloroethyl)ether	ND	6600	20	B2B1048	02/15/2022	02/16/22 18:27	D1
bis(2-chloroisopropyl)ether	ND	6600	20	B2B1048	02/15/2022	02/16/22 18:27	D1

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612		Reported :	03/18/2022

Client Sample ID: Sample 14
Lab ID: 2200184-01

Semivolatile Organic Compounds by EPA 8270C **Analyst: EB**

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
bis(2-ethylhexyl)phthalate	ND	6600	20	B2B1048	02/15/2022	02/16/22 18:27	D1
Butylbenzylphthalate	ND	6600	20	B2B1048	02/15/2022	02/16/22 18:27	D1
Chrysene	ND	6600	20	B2B1048	02/15/2022	02/16/22 18:27	D1
Di-n-butylphthalate	ND	6600	20	B2B1048	02/15/2022	02/16/22 18:27	D1
Di-n-octylphthalate	ND	6600	20	B2B1048	02/15/2022	02/16/22 18:27	D1
Dibenz(a,h)anthracene	ND	6600	20	B2B1048	02/15/2022	02/16/22 18:27	D1
Dibenzofuran	ND	6600	20	B2B1048	02/15/2022	02/16/22 18:27	D1
Diethyl phthalate	ND	6600	20	B2B1048	02/15/2022	02/16/22 18:27	D1
Dimethyl phthalate	ND	6600	20	B2B1048	02/15/2022	02/16/22 18:27	D1
Fluoranthene	ND	6600	20	B2B1048	02/15/2022	02/16/22 18:27	D1
Fluorene	ND	6600	20	B2B1048	02/15/2022	02/16/22 18:27	D1
Hexachlorobenzene	ND	6600	20	B2B1048	02/15/2022	02/16/22 18:27	D1
Hexachlorobutadiene	ND	13000	20	B2B1048	02/15/2022	02/16/22 18:27	D1
Hexachlorocyclopentadiene	ND	13000	20	B2B1048	02/15/2022	02/16/22 18:27	D1
Hexachloroethane	ND	6600	20	B2B1048	02/15/2022	02/16/22 18:27	D1
Indeno(1,2,3-cd)pyrene	ND	6600	20	B2B1048	02/15/2022	02/16/22 18:27	D1
Isophorone	ND	6600	20	B2B1048	02/15/2022	02/16/22 18:27	D1
N-Nitroso-di-n propylamine	ND	6600	20	B2B1048	02/15/2022	02/16/22 18:27	D1
N-Nitrosodiphenylamine	ND	6600	20	B2B1048	02/15/2022	02/16/22 18:27	D1
Naphthalene	ND	6600	20	B2B1048	02/15/2022	02/16/22 18:27	D1
Nitrobenzene	ND	6600	20	B2B1048	02/15/2022	02/16/22 18:27	D1
Pentachlorophenol	ND	33000	20	B2B1048	02/15/2022	02/16/22 18:27	D1
Phenanthrene	ND	6600	20	B2B1048	02/15/2022	02/16/22 18:27	D1
Phenol	ND	6600	20	B2B1048	02/15/2022	02/16/22 18:27	D1
Pyrene	ND	6600	20	B2B1048	02/15/2022	02/16/22 18:27	D1
Pyridine	ND	33000	20	B2B1048	02/15/2022	02/16/22 18:27	D1
Surrogate: 1,2-Dichlorobenzene-d4	*23.4 %*	*23 - 102*		B2B1048	02/15/2022	*02/16/22 18:27*	
Surrogate: 2,4,6-Tribromophenol	*0%*	*3 - 138*		B2B1048	02/15/2022	*02/16/22 18:27*	S4
Surrogate: 2-Chlorophenol-d4	*0%*	*18 - 105*		B2B1048	02/15/2022	*02/16/22 18:27*	S4
Surrogate: 2-Fluorobiphenyl	*12.4 %*	*34 - 106*		B2B1048	02/15/2022	*02/16/22 18:27*	S4
Surrogate: 2-Fluorophenol	*0%*	*16 - 94*		B2B1048	02/15/2022	*02/16/22 18:27*	S4
Surrogate: 4-Terphenyl-d14	*19.8 %*	*31 - 130*		B2B1048	02/15/2022	*02/16/22 18:27*	S4
Surrogate: Nitrobenzene-d5	*0%*	*23 - 102*		B2B1048	02/15/2022	*02/16/22 18:27*	S4
Surrogate: Phenol-d6	*0%*	*14 - 104*		B2B1048	02/15/2022	*02/16/22 18:27*	S4

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612		Reported :	03/18/2022

QUALITY CONTROL SECTION

Percent Moisture - Quality Control

Analyte	Result (% by Weight)	PQL (% by Weight)	MDL (% by Weight)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B2B1112 - No_Prep_WC1_S										
Duplicate (B2B1112-DUP1)			**Source: 2200184-01**			Prepared: 2/18/2022 Analyzed: 2/18/2022				
Percent Solids	99.8700	0.10	0.10		99.8700			7.64E-6	30	

Certificate of Analysis

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19200 Von Karman Ave., Suite 800		Report To :	Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612		Reported :	03/18/2022

Title 22 Metals by ICP-AES EPA 6010B - Quality Control

Analyte	Result (mg/kg wet)	PQL (mg/kg wet)	MDL (mg/kg wet)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B2B1026 - EPA 3050B_S										
Blank (B2B1026-BLK1)						Prepared: 2/15/2022 Analyzed: 2/15/2022				
Antimony	ND	2.0	0.51							
Arsenic	ND	1.0	0.12							
Barium	ND	1.0	0.12							
Beryllium	ND	1.0	0.03							
Cadmium	ND	1.0	0.14							
Chromium	ND	1.0	0.26							
Cobalt	ND	1.0	0.07							
Copper	ND	2.0	0.19							
Lead	ND	1.0	0.18							
Molybdenum	ND	1.0	0.12							
Nickel	ND	1.0	0.18							
Selenium	ND	1.0	0.40							
Silver	ND	1.0	0.12							
Thallium	ND	1.0	0.38							
Vanadium	ND	1.0	0.06							
Zinc	ND	1.0	0.15							
LCS (B2B1026-BS1)						Prepared: 2/15/2022 Analyzed: 2/15/2022				
Antimony	25.3997	2.0	0.51	25.0000		102	80 - 120			
Arsenic	25.4955	1.0	0.12	25.0000		102	80 - 120			
Barium	27.1298	1.0	0.12	25.0000		109	80 - 120			
Beryllium	25.8646	1.0	0.03	25.0100		103	80 - 120			
Cadmium	25.5954	1.0	0.14	25.0000		102	80 - 120			
Chromium	25.1561	1.0	0.26	25.0000		101	80 - 120			
Cobalt	27.1309	1.0	0.07	25.0000		109	80 - 120			
Copper	25.7506	2.0	0.19	25.0000		103	80 - 120			
Lead	25.6326	1.0	0.18	25.0000		103	80 - 120			
Molybdenum	26.6572	1.0	0.12	25.0000		107	80 - 120			
Nickel	26.2938	1.0	0.18	25.0000		105	80 - 120			
Selenium	27.2805	1.0	0.40	25.0000		109	80 - 120			
Silver	12.2827	1.0	0.12	12.5000		98.3	80 - 120			
Thallium	26.9164	1.0	0.38	25.0000		108	80 - 120			
Vanadium	26.5199	1.0	0.06	25.0000		106	80 - 120			
Zinc	26.8281	1.0	0.15	25.0000		107	80 - 120			
Matrix Spike (B2B1026-MS1)			**Source: 2200183-01**			Prepared: 2/15/2022 Analyzed: 2/15/2022				
Antimony	17.1550	2.0	0.51	25.0000	ND	68.6	0 - 102			
Arsenic	28.3101	1.0	0.12	25.0000	1.74010	106	55 - 117			
Barium	49.3481	1.0	0.12	25.0000	24.5360	99.2	11 - 177			
Beryllium	25.4598	1.0	0.03	25.0100	0.210663	101	64 - 115			
Cadmium	25.9674	1.0	0.14	25.0000	0.454621	102	62 - 116			
Chromium	36.1470	1.0	0.26	25.0000	10.1580	104	42 - 145			
Cobalt	27.6438	1.0	0.07	25.0000	2.28970	101	60 - 126			
Copper	33.6530	2.0	0.19	25.0000	7.60498	104	37 - 163			
Lead	36.6650	1.0	0.18	25.0000	10.6730	104	26 - 161			

Certificate of Analysis

GSI Environmental, Inc.	Project Number : SATI / 6013
19200 Von Karman Ave., Suite 800	Report To : Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612	Reported : 03/18/2022

Title 22 Metals by ICP-AES EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/kg wet)	PQL (mg/kg wet)	MDL (mg/kg wet)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B2B1026 - EPA 3050B_S (continued)										
Matrix Spike (B2B1026-MS1) - Continued			**Source: 2200183-01**			Prepared: 2/15/2022 Analyzed: 2/15/2022				
Molybdenum	26.9940	1.0	0.12	25.0000	ND	108	31 - 122			
Nickel	30.4257	1.0	0.18	25.0000	5.73226	98.8	52 - 130			
Selenium	27.3310	1.0	0.40	25.0000	1.18952	105	25 - 129			
Silver	11.6726	1.0	0.12	12.5000	ND	93.4	48 - 133			
Thallium	21.7041	1.0	0.38	25.0000	ND	86.8	25 - 119			
Vanadium	37.8862	1.0	0.06	25.0000	11.6620	105	51 - 141			
Zinc	40.1170	1.0	0.15	25.0000	15.5679	98.2	8 - 170			
Matrix Spike Dup (B2B1026-MSD1)			**Source: 2200183-01**			Prepared: 2/15/2022 Analyzed: 2/15/2022				
Antimony	17.0675	2.0	0.51	25.0000	ND	68.3	0 - 102	0.512	20	
Arsenic	27.7020	1.0	0.12	25.0000	1.74010	104	55 - 117	2.17	20	
Barium	48.9317	1.0	0.12	25.0000	24.5360	97.6	11 - 177	0.847	20	
Beryllium	25.4524	1.0	0.03	25.0100	0.210663	101	64 - 115	0.0290	20	
Cadmium	25.9677	1.0	0.14	25.0000	0.454621	102	62 - 116	0.00115	20	
Chromium	35.7119	1.0	0.26	25.0000	10.1580	102	42 - 145	1.21	20	
Cobalt	27.2996	1.0	0.07	25.0000	2.28970	100	60 - 126	1.25	20	
Copper	33.1872	2.0	0.19	25.0000	7.60498	102	37 - 163	1.39	20	
Lead	35.9232	1.0	0.18	25.0000	10.6730	101	26 - 161	2.04	20	
Molybdenum	26.9844	1.0	0.12	25.0000	ND	108	31 - 122	0.0355	20	
Nickel	29.9474	1.0	0.18	25.0000	5.73226	96.9	52 - 130	1.58	20	
Selenium	28.0310	1.0	0.40	25.0000	1.18952	107	25 - 129	2.53	20	
Silver	11.6897	1.0	0.12	12.5000	ND	93.5	48 - 133	0.146	20	
Thallium	21.5407	1.0	0.38	25.0000	ND	86.2	25 - 119	0.756	20	
Vanadium	37.6780	1.0	0.06	25.0000	11.6620	104	51 - 141	0.551	20	
Zinc	39.1756	1.0	0.15	25.0000	15.5679	94.4	8 - 170	2.37	20	

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612		Reported :	03/18/2022

Hexavalent Chromium by EPA 7196A/3060A - Quality Control

Analyte	Result (mg/kg wet)	PQL (mg/kg wet)	MDL (mg/kg wet)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B2B1041 - EPA 3060A_S (WC)										
Blank (B2B1041-BLK1)						Prepared: 2/15/2022 Analyzed: 2/15/2022				
Hexavalent Chromium	ND	1.0	0.39							
LCS (B2B1041-BS1)						Prepared: 2/15/2022 Analyzed: 2/15/2022				
Hexavalent Chromium	42.7000	1.0	0.39	50.0000		85.4	80 - 120			
Matrix Spike (B2B1041-MS1)			**Source: 2200183-03**			Prepared: 2/15/2022 Analyzed: 2/15/2022				
Hexavalent Chromium	43.8000	1.0	0.39	50.0000	0.900000	85.8	75 - 125			
Matrix Spike (B2B1041-MS2)			**Source: 2200183-03**			Prepared: 2/15/2022 Analyzed: 2/15/2022				
Hexavalent Chromium	1680.00	50	20	1961.76	ND	85.6	75 - 125			
Matrix Spike Dup (B2B1041-MSD1)			**Source: 2200183-03**			Prepared: 2/15/2022 Analyzed: 2/15/2022				
Hexavalent Chromium	44.3000	1.0	0.39	50.0000	0.900000	86.8	75 - 125	1.14	20	

Certificate of Analysis

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19200 Von Karman Ave., Suite 800		Report To :	Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612		Reported :	03/18/2022

Mercury by AA (Cold Vapor) EPA 7471A - Quality Control

Analyte	Result (mg/kg wet)	PQL (mg/kg wet)	MDL (mg/kg wet)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B2B1034 - EPA 7471_S										
Blank (B2B1034-BLK1)						Prepared: 2/15/2022 Analyzed: 2/15/2022				
Mercury	ND	0.10	0.01							
LCS (B2B1034-BS1)						Prepared: 2/15/2022 Analyzed: 2/15/2022				
Mercury	0.418939	0.10	0.01	0.416667		101	80 - 120			
Matrix Spike (B2B1034-MS1)			**Source: 2200140-01**			Prepared: 2/15/2022 Analyzed: 2/15/2022				
Mercury	0.453887	0.10	0.01	0.416667	0.085169	88.5	70 - 130			
Matrix Spike Dup (B2B1034-MSD1)			**Source: 2200140-01**			Prepared: 2/15/2022 Analyzed: 2/15/2022				
Mercury	0.474529	0.10	0.01	0.416667	0.085169	93.4	70 - 130	4.45	20	

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612		Reported :	03/18/2022

Mercury by AA (Cold Vapor) EPA 7471A - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B2B1034 - EPA 7471_S									
Post Spike (B2B1034-PS1)			**Source: 2200140-01**		Prepared: 2/15/2022 Analyzed: 2/15/2022				
Mercury	0.006097		5.00000E-3	0.001022	101	85 - 115			

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612		Reported :	03/18/2022

Diesel and Oil Range Organics by EPA 8015B - Quality Control

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B2B1043 - GCSEMI_DRO_S										
Blank (B2B1043-BLK1)						Prepared: 2/15/2022 Analyzed: 2/15/2022				
DRO	ND	10	3.6							
ORO	ND	10	3.6							
Surrogate: p-Terphenyl	*64.96*			*80.0000*		*81.2*	*62 - 141*			
LCS (B2B1043-BS1)						Prepared: 2/15/2022 Analyzed: 2/15/2022				
DRO	978.505	10	3.6	1000.00		97.9	56 - 139			
Surrogate: p-Terphenyl	*71.15*			*80.0000*		*88.9*	*62 - 141*			
Matrix Spike (B2B1043-MS1)			**Source: 2200184-01**			Prepared: 2/15/2022 Analyzed: 2/15/2022				
DRO	808.920	100	36	1000.00	ND	80.9	38 - 161			
Surrogate: p-Terphenyl	*76.59*			*80.0000*		*95.7*	*62 - 141*			
Matrix Spike Dup (B2B1043-MSD1)			**Source: 2200184-01**			Prepared: 2/15/2022 Analyzed: 2/15/2022				
DRO	718.320	100	36	1000.00	ND	71.8	38 - 161	11.9	20	
Surrogate: p-Terphenyl	*64.66*			*80.0000*		*80.8*	*62 - 141*			

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612		Reported :	03/18/2022

Polychlorinated Biphenyls by EPA 8082 - Quality Control

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	MDL (ug/kg dry)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B2B1049 - GCSEMI_PCB/PEST_S										
Matrix Spike (B2B1049-MS1)			**Source: 2200184-01**			Prepared: 2/15/2022 Analyzed: 2/15/2022				
Aroclor 1016	70.2546	16	2.0	166.884	ND	42.1	0 - 135			
Aroclor 1260	57.0949	16	2.0	166.884	660.116	-361	0 - 127			M2
Surrogate: Decachlorobiphenyl	*1.497*			*16.6884*		*8.97*	*0 - 87*			
Surrogate: Tetrachloro-m-xylene	*0.8456*			*16.6884*		*5.07*	*0 - 103*			
Matrix Spike Dup (B2B1049-MSD1)			**Source: 2200184-01**			Prepared: 2/15/2022 Analyzed: 2/15/2022				
Aroclor 1016	259.869	16	2.0	166.884	ND	156	0 - 135	115	20	M2, R
Aroclor 1260	203.277	16	2.0	166.884	660.116	-274	0 - 127	112	20	M2, R
Surrogate: Decachlorobiphenyl	*6.017*			*16.6884*		*36.1*	*0 - 87*			
Surrogate: Tetrachloro-m-xylene	*3.447*			*16.6884*		*20.7*	*0 - 103*			

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612		Reported :	03/18/2022

Polychlorinated Biphenyls by EPA 8082 - Quality Control

Analyte	Result (ug/kg wet)	PQL (ug/kg wet)	MDL (ug/kg wet)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B2B1049 - GCSEMI_PCB/PEST_S										
Blank (B2B1049-BLK1)						Prepared: 2/15/2022 Analyzed: 2/15/2022				
Aroclor 1016	ND	16	1.9							
Aroclor 1221	ND	16	1.9							
Aroclor 1232	ND	16	1.9							
Aroclor 1242	ND	16	1.9							
Aroclor 1248	ND	16	1.9							
Aroclor 1254	ND	16	1.9							
Aroclor 1260	ND	16	1.9							
Surrogate: Decachlorobiphenyl	*11.61*			*16.6667*		*69.6*	*0 - 87*			
Surrogate: Tetrachloro-m-xylene	*10.78*			*16.6667*		*64.7*	*0 - 103*			
Blank (B2B1049-BLK2)						Prepared: 2/15/2022 Analyzed: 2/16/2022				
Aroclor 1016	ND	16	1.9							
Aroclor 1221	ND	16	1.9							
Aroclor 1232	ND	16	1.9							
Aroclor 1242	ND	16	1.9							
Aroclor 1248	ND	16	1.9							
Aroclor 1254	ND	16	1.9							
Aroclor 1260	ND	16	1.9							
Surrogate: Decachlorobiphenyl	*9.526*			*33.3333*		*28.6*	*0 - 87*			
Surrogate: Tetrachloro-m-xylene	*8.626*			*33.3333*		*25.9*	*0 - 103*			
LCS (B2B1049-BS1)						Prepared: 2/15/2022 Analyzed: 2/15/2022				
Aroclor 1016	111.024	16	1.9	166.667		66.6	11 - 108			
Aroclor 1260	119.099	16	1.9	166.667		71.5	19 - 112			
Surrogate: Decachlorobiphenyl	*11.49*			*16.6667*		*68.9*	*0 - 87*			
Surrogate: Tetrachloro-m-xylene	*10.44*			*16.6667*		*62.6*	*0 - 103*			
LCS (B2B1049-BS2)						Prepared: 2/15/2022 Analyzed: 2/16/2022				
Aroclor 1016	94.5050	16	1.9	333.333		28.4	11 - 108			
Aroclor 1260	104.500	16	1.9	333.333		31.3	19 - 112			
Surrogate: Decachlorobiphenyl	*9.938*			*33.3333*		*29.8*	*0 - 87*			
Surrogate: Tetrachloro-m-xylene	*8.777*			*33.3333*		*26.3*	*0 - 103*			

Certificate of Analysis

GSI Environmental, Inc.	Project Number : SATI / 6013
19200 Von Karman Ave., Suite 800	Report To : Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612	Reported : 03/18/2022

Semivolatile Organic Compounds by EPA 8270C - Quality Control

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	MDL (ug/kg dry)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B2B1048 - MSSEMI_NAL										
Matrix Spike (B2B1048-MS1)			**Source: 2200184-01**			Prepared: 2/15/2022 Analyzed: 2/16/2022				
1,2,4-Trichlorobenzene	1134.81	6600	1000	6675.34	ND	17.0	35 - 113			M6
1,2-Dichlorobenzene	1829.04	6600	510	6675.34	ND	27.4	32 - 102			M6
1,3-Dichlorobenzene	2002.60	6600	550	6675.34	ND	30.0	32 - 100			M6
1,4-Dichlorobenzene	1962.55	6600	540	6675.34	ND	29.4	33 - 97			M6
2,4,5-Trichlorophenol	ND	6600	590	6675.34	ND	NR	36 - 124			M6
2,4,6-Trichlorophenol	ND	6600	690	6675.34	ND	NR	37 - 130			M6
2,4-Dichlorophenol	ND	33000	670	6675.34	ND	NR	32 - 130			M6
2,4-Dimethylphenol	ND	6600	510	6675.34	ND	NR	30 - 128			M6
2,4-Dinitrophenol	ND	33000	1700	6675.34	ND	NR	0 - 203			
2,4-Dinitrotoluene	ND	6600	670	6675.34	ND	NR	21 - 168			M6
2,6-Dinitrotoluene	ND	6600	980	6675.34	ND	NR	31 - 152			M6
2-Chloronaphthalene	1775.64	6600	560	6675.34	ND	26.6	33 - 130			M6
2-Chlorophenol	ND	6600	610	6675.34	ND	NR	32 - 106			M6
2-Methylnaphthalene	1575.38	6600	540	6675.34	ND	23.6	33 - 125			M6
2-Methylphenol	ND	6600	720	6675.34	ND	NR	34 - 96			M6
2-Nitroaniline	ND	33000	850	6675.34	ND	NR	30 - 146			M6
2-Nitrophenol	ND	6600	900	6675.34	ND	NR	22 - 125			M6
3,3´-Dichlorobenzidine	ND	13000	5600	6675.34	ND	NR	19 - 144			M6
3-Nitroaniline	ND	33000	980	6675.34	ND	NR	36 - 133			M6
4,6-Dinitro-2-methyphenol	ND	33000	830	6675.34	ND	NR	0 - 196			
4-Bromophenyl-phenylether	ND	6600	1300	6675.34	ND	NR	41 - 121			M6
4-Chloro-3-methylphenol	ND	13000	1400	6675.34	ND	NR	39 - 134			M6
4-Chloroaniline	ND	13000	1100	6675.34	ND	NR	37 - 115			M6
4-Chlorophenyl-phenylether	1548.68	6600	670	6675.34	ND	23.2	34 - 133			M6
4-Methylphenol	ND	6600	1100	3337.67	ND	NR	34 - 121			M6
4-Nitroaniline	ND	33000	750	6675.34	ND	NR	30 - 138			M6
4-Nitrophenol	ND	6600	1300	6675.34	ND	NR	5 - 154			M6
Acenaphthene	2363.07	6600	850	6675.34	ND	35.4	33 - 121			
Acenaphthylene	1949.20	6600	1200	6675.34	ND	29.2	35 - 120			M6
Anthracene	2282.97	6600	1000	6675.34	ND	34.2	28 - 133			
Benzidine (M)	ND	33000	29000	6675.34	ND	NR	8 - 175			M6
Benzo(a)anthracene	2509.93	6600	870	6675.34	ND	37.6	32 - 127			
Benzo(a)pyrene	2216.21	6600	1300	6675.34	ND	33.2	35 - 127			M6
Benzo(b)fluoranthene	2242.92	6600	1300	6675.34	ND	33.6	29 - 126			
Benzo(g,h,i)perylene	1909.15	6600	1600	6675.34	ND	28.6	26 - 129			
Benzo(k)fluoranthene	2763.59	6600	660	6675.34	ND	41.4	36 - 120			
Benzoic acid	ND	33000	18000	6675.34	ND	NR	0 - 208			
Benzyl alcohol	ND	13000	640	6675.34	ND	NR	32 - 120			M6
bis(2-chloroethoxy)methane	ND	6600	1300	6675.34	ND	NR	34 - 108			M6
bis(2-Chloroethyl)ether	ND	6600	1300	6675.34	ND	NR	34 - 100			M6
bis(2-chloroisopropyl)ether	ND	6600	1500	6675.34	ND	NR	21 - 111			M6
bis(2-ethylhexyl)phthalate	3097.36	6600	1300	6675.34	ND	46.4	39 - 131			
Butylbenzylphthalate	2069.36	6600	830	6675.34	ND	31.0	39 - 129			M6
Chrysene	2977.20	6600	1700	6675.34	ND	44.6	33 - 126			
Di-n-butylphthalate	1775.64	6600	1000	6675.34	ND	26.6	42 - 122			M6

Certificate of Analysis

GSI Environmental, Inc.	Project Number : SATI / 6013
19200 Von Karman Ave., Suite 800	Report To : Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612	Reported : 03/18/2022

Semivolatile Organic Compounds by EPA 8270C - Quality Control (cont'd)

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	MDL (ug/kg dry)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B2B1048 - MSSEMI_NAL (continued)										
Matrix Spike (B2B1048-MS1) - Continued		**Source: 2200184-01**			Prepared: 2/15/2022 Analyzed: 2/16/2022					
Di-n-octylphthalate	1588.73	6600	1300	6675.34	ND	23.8	30 - 147			M6
Dibenz(a,h)anthracene	1668.84	6600	900	6675.34	ND	25.0	30 - 126			M6
Dibenzofuran	2363.07	6600	1200	6675.34	ND	35.4	36 - 133			M6
Diethyl phthalate	1548.68	6600	1200	6675.34	ND	23.2	28 - 139			M6
Dimethyl phthalate	1375.12	6600	810	6675.34	ND	20.6	32 - 129			M6
Fluoranthene	2830.34	6600	1200	6675.34	ND	42.4	23 - 140			
Fluorene	2256.27	6600	2100	6675.34	ND	33.8	32 - 130			
Hexachlorobenzene	2136.11	6600	1100	6675.34	ND	32.0	27 - 148			
Hexachlorobutadiene	1922.50	13000	1100	6675.34	ND	28.8	29 - 112			M6
Hexachlorocyclopentadiene	ND	13000	1400	6675.34	ND	NR	13 - 147			M6
Hexachloroethane	ND	6600	1900	6675.34	ND	NR	31 - 104			M6
Indeno(1,2,3-cd)pyrene	1829.04	6600	1500	6675.34	ND	27.4	21 - 137			
Isophorone	ND	6600	1700	6675.34	ND	NR	34 - 112			M6
N-Nitroso-di-n propylamine	ND	6600	1200	6675.34	ND	NR	36 - 115			M6
N-Nitrosodiphenylamine	1895.80	6600	640	6675.34	ND	28.4	40 - 120			M6
Naphthalene	2269.62	6600	1100	6675.34	ND	34.0	33 - 108			
Nitrobenzene	ND	6600	1100	6675.34	ND	NR	32 - 122			M6
Pentachlorophenol	ND	33000	990	6675.34	ND	NR	0 - 151			
Phenanthrene	2576.68	6600	1300	6675.34	ND	38.6	40 - 122			M6
Phenol	ND	6600	680	6675.34	ND	NR	35 - 112			M6
Pyrene	2963.85	6600	1400	6675.34	ND	44.4	28 - 132			
Pyridine	ND	33000	5300	6675.34	ND	NR	5 - 107			M6
Surrogate: 1,2-Dichlorobenzene-d4	*3271*			*6675.34*		*49.0*	*23 - 102*			
Surrogate: 2,4,6-Tribromophenol	*0.000*			*10013.0*		*NR*	*3 - 138*			S4
Surrogate: 2-Chlorophenol-d4	*1015*			*10013.0*		*10.1*	*18 - 105*			S4
Surrogate: 2-Fluorobiphenyl	*3004*			*6675.34*		*45.0*	*34 - 106*			
Surrogate: 2-Fluorophenol	*0.000*			*10013.0*		*NR*	*16 - 94*			S4
Surrogate: 4-Terphenyl-d14	*2603*			*6675.34*		*39.0*	*31 - 130*			
Surrogate: Nitrobenzene-d5	*547.4*			*6675.34*		*8.20*	*23 - 102*			S4
Surrogate: Phenol-d6	*0.000*			*10013.0*		*NR*	*14 - 104*			S4
Matrix Spike Dup (B2B1048-MSD1)		**Source: 2200184-01**			Prepared: 2/15/2022 Analyzed: 2/16/2022					
1,2,4-Trichlorobenzene	ND	6600	1000	6675.34	ND	NR	35 - 113	NR	20	M6
1,2-Dichlorobenzene	ND	6600	510	6675.34	ND	NR	32 - 102	NR	20	M6
1,3-Dichlorobenzene	ND	6600	550	6675.34	ND	NR	32 - 100	NR	20	M6
1,4-Dichlorobenzene	ND	6600	540	6675.34	ND	NR	33 - 97	NR	20	M6
2,4,5-Trichlorophenol	ND	6600	590	6675.34	ND	NR	36 - 124	NR	20	M6
2,4,6-Trichlorophenol	ND	6600	690	6675.34	ND	NR	37 - 130	NR	20	M6
2,4-Dichlorophenol	ND	33000	670	6675.34	ND	NR	32 - 130	NR	20	M6
2,4-Dimethylphenol	ND	6600	510	6675.34	ND	NR	30 - 128	NR	20	M6
2,4-Dinitrophenol	ND	33000	1700	6675.34	ND	NR	0 - 203	NR	20	
2,4-Dinitrotoluene	ND	6600	670	6675.34	ND	NR	21 - 168	NR	20	M6
2,6-Dinitrotoluene	ND	6600	980	6675.34	ND	NR	31 - 152	NR	20	M6
2-Chloronaphthalene	ND	6600	560	6675.34	ND	NR	33 - 130	NR	20	M6
2-Chlorophenol	ND	6600	610	6675.34	ND	NR	32 - 106	NR	20	M6

Certificate of Analysis

GSI Environmental, Inc.	Project Number : SATI / 6013
19200 Von Karman Ave., Suite 800	Report To : Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612	Reported : 03/18/2022

Semivolatile Organic Compounds by EPA 8270C - Quality Control (cont'd)

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	MDL (ug/kg dry)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B2B1048 - MSSEMI_NAL (continued)										
Matrix Spike Dup (B2B1048-MSD1) - Continued		**Source: 2200184-01**			Prepared: 2/15/2022 Analyzed: 2/16/2022					
2-Methylnaphthalene	ND	6600	540	6675.34	ND	NR	33 - 125	NR	20	M6
2-Methylphenol	ND	6600	720	6675.34	ND	NR	34 - 96	NR	20	M6
2-Nitroaniline	ND	33000	850	6675.34	ND	NR	30 - 146	NR	20	M6
2-Nitrophenol	ND	6600	900	6675.34	ND	NR	22 - 125	NR	20	M6
3,3´-Dichlorobenzidine	ND	13000	5600	6675.34	ND	NR	19 - 144	NR	20	M6
3-Nitroaniline	ND	33000	980	6675.34	ND	NR	36 - 133	NR	20	M6
4,6-Dinitro-2-methyphenol	ND	33000	830	6675.34	ND	NR	0 - 196	NR	20	
4-Bromophenyl-phenylether	ND	6600	1300	6675.34	ND	NR	41 - 121	NR	20	M6
4-Chloro-3-methylphenol	ND	13000	1400	6675.34	ND	NR	39 - 134	NR	20	M6
4-Chloroaniline	ND	13000	1100	6675.34	ND	NR	37 - 115	NR	20	M6
4-Chlorophenyl-phenylether	ND	6600	670	6675.34	ND	NR	34 - 133	NR	20	M6
4-Methylphenol	ND	6600	1100	3337.67	ND	NR	34 - 121	NR	20	M6
4-Nitroaniline	ND	33000	750	6675.34	ND	NR	30 - 138	NR	20	M6
4-Nitrophenol	ND	6600	1300	6675.34	ND	NR	5 - 154	NR	20	M6
Acenaphthene	ND	6600	850	6675.34	ND	NR	33 - 121	NR	20	M6
Acenaphthylene	ND	6600	1200	6675.34	ND	NR	35 - 120	NR	20	M6
Anthracene	ND	6600	1000	6675.34	ND	NR	28 - 133	NR	20	M6
Benzidine (M)	ND	33000	29000	6675.34	ND	NR	8 - 175	NR	20	M6
Benzo(a)anthracene	ND	6600	870	6675.34	ND	NR	32 - 127	NR	20	M6
Benzo(a)pyrene	ND	6600	1300	6675.34	ND	NR	35 - 127	NR	20	M6
Benzo(b)fluoranthene	ND	6600	1300	6675.34	ND	NR	29 - 126	NR	20	M6
Benzo(g,h,i)perylene	ND	6600	1600	6675.34	ND	NR	26 - 129	NR	20	M6
Benzo(k)fluoranthene	ND	6600	660	6675.34	ND	NR	36 - 120	NR	20	M6
Benzoic acid	ND	33000	18000	6675.34	ND	NR	0 - 208	NR	20	
Benzyl alcohol	ND	13000	640	6675.34	ND	NR	32 - 120	NR	20	M6
bis(2-chloroethoxy)methane	ND	6600	1300	6675.34	ND	NR	34 - 108	NR	20	M6
bis(2-Chloroethyl)ether	ND	6600	1300	6675.34	ND	NR	34 - 100	NR	20	M6
bis(2-chloroisopropyl)ether	ND	6600	1500	6675.34	ND	NR	21 - 111	NR	20	M6
bis(2-ethylhexyl)phthalate	ND	6600	1300	6675.34	ND	NR	39 - 131	NR	20	M6
Butylbenzylphthalate	ND	6600	830	6675.34	ND	NR	39 - 129	NR	20	M6
Chrysene	ND	6600	1700	6675.34	ND	NR	33 - 126	NR	20	M6
Di-n-butylphthalate	ND	6600	1000	6675.34	ND	NR	42 - 122	NR	20	M6
Di-n-octylphthalate	ND	6600	1300	6675.34	ND	NR	30 - 147	NR	20	M6
Dibenz(a,h)anthracene	ND	6600	900	6675.34	ND	NR	30 - 126	NR	20	M6
Dibenzofuran	ND	6600	1200	6675.34	ND	NR	36 - 133	NR	20	M6
Diethyl phthalate	ND	6600	1200	6675.34	ND	NR	28 - 139	NR	20	M6
Dimethyl phthalate	ND	6600	810	6675.34	ND	NR	32 - 129	NR	20	M6
Fluoranthene	ND	6600	1200	6675.34	ND	NR	23 - 140	NR	20	M6
Fluorene	ND	6600	2100	6675.34	ND	NR	32 - 130	NR	20	M6
Hexachlorobenzene	ND	6600	1100	6675.34	ND	NR	27 - 148	NR	20	M6
Hexachlorobutadiene	ND	13000	1100	6675.34	ND	NR	29 - 112	NR	20	M6
Hexachlorocyclopentadiene	ND	13000	1400	6675.34	ND	NR	13 - 147	NR	20	M6
Hexachloroethane	ND	6600	1900	6675.34	ND	NR	31 - 104	NR	20	M6
Indeno(1,2,3-cd)pyrene	ND	6600	1500	6675.34	ND	NR	21 - 137	NR	20	M6
Isophorone	ND	6600	1700	6675.34	ND	NR	34 - 112	NR	20	M6

Certificate of Analysis

GSI Environmental, Inc.	Project Number : SATI / 6013
19200 Von Karman Ave., Suite 800	Report To : Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612	Reported : 03/18/2022

Semivolatile Organic Compounds by EPA 8270C - Quality Control (cont'd)

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	MDL (ug/kg dry)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B2B1048 - MSSEMI_NAL (continued)										
Matrix Spike Dup (B2B1048-MSD1) - Continued		**Source: 2200184-01**			Prepared: 2/15/2022 Analyzed: 2/16/2022					
N-Nitroso-di-n propylamine	ND	6600	1200	6675.34	ND	NR	36 - 115	NR	20	M6
N-Nitrosodiphenylamine	ND	6600	640	6675.34	ND	NR	40 - 120	NR	20	M6
Naphthalene	ND	6600	1100	6675.34	ND	NR	33 - 108	NR	20	M6
Nitrobenzene	ND	6600	1100	6675.34	ND	NR	32 - 122	NR	20	M6
Pentachlorophenol	ND	33000	990	6675.34	ND	NR	0 - 151	NR	20	
Phenanthrene	ND	6600	1300	6675.34	ND	NR	40 - 122	NR	20	M6
Phenol	ND	6600	680	6675.34	ND	NR	35 - 112	NR	20	M6
Pyrene	ND	6600	1400	6675.34	ND	NR	28 - 132	NR	20	M6
Pyridine	ND	33000	5300	6675.34	ND	NR	5 - 107	NR	20	M6
Surrogate: 1,2-Dichlorobenzene-d4	*1709*			*6675.34*		*25.6*	*23 - 102*			
Surrogate: 2,4,6-Tribromophenol	*0.000*			*10013.0*		*NR*	*3 - 138*			S4
Surrogate: 2-Chlorophenol-d4	*761.0*			*10013.0*		*7.60*	*18 - 105*			S4
Surrogate: 2-Fluorobiphenyl	*974.6*			*6675.34*		*14.6*	*34 - 106*			S4
Surrogate: 2-Fluorophenol	*0.000*			*10013.0*		*NR*	*16 - 94*			S4
Surrogate: 4-Terphenyl-d14	*1295*			*6675.34*		*19.4*	*31 - 130*			S4
Surrogate: Nitrobenzene-d5	*0.000*			*6675.34*		*NR*	*23 - 102*			S4
Surrogate: Phenol-d6	*0.000*			*10013.0*		*NR*	*14 - 104*			S4

Certificate of Analysis

GSI Environmental, Inc.	Project Number : SATI / 6013
19200 Von Karman Ave., Suite 800	Report To : Timothy Wood/ Vinnie Robino/Josh Voss
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Semivolatile Organic Compounds by EPA 8270C - Quality Control

Analyte	Result (ug/kg wet)	PQL (ug/kg wet)	MDL (ug/kg wet)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B2B1048 - MSSEMI_NAL										
Blank (B2B1048-BLK1)							Prepared: 2/15/2022 Analyzed: 2/16/2022			
1,2,4-Trichlorobenzene	ND	330	50							
1,2-Dichlorobenzene	ND	330	26							
1,3-Dichlorobenzene	ND	330	27							
1,4-Dichlorobenzene	ND	330	27							
2,4,5-Trichlorophenol	ND	330	30							
2,4,6-Trichlorophenol	ND	330	35							
2,4-Dichlorophenol	ND	1600	34							
2,4-Dimethylphenol	ND	330	26							
2,4-Dinitrophenol	ND	1600	86							
2,4-Dinitrotoluene	ND	330	33							
2,6-Dinitrotoluene	ND	330	49							
2-Chloronaphthalene	ND	330	28							
2-Chlorophenol	ND	330	31							
2-Methylnaphthalene	ND	330	27							
2-Methylphenol	ND	330	36							
2-Nitroaniline	ND	1600	43							
2-Nitrophenol	ND	330	45							
3,3´-Dichlorobenzidine	ND	660	280							
3-Nitroaniline	ND	1600	49							
4,6-Dinitro-2-methyphenol	ND	1600	41							
4-Bromophenyl-phenylether	ND	330	64							
4-Chloro-3-methylphenol	ND	660	71							
4-Chloroaniline	ND	660	53							
4-Chlorophenyl-phenylether	ND	330	33							
4-Methylphenol	ND	330	57							
4-Nitroaniline	ND	1600	37							
4-Nitrophenol	ND	330	64							
Acenaphthene	ND	330	43							
Acenaphthylene	ND	330	62							
Anthracene	ND	330	51							
Benzidine (M)	ND	1600	1400							
Benzo(a)anthracene	ND	330	44							
Benzo(a)pyrene	ND	330	64							
Benzo(b)fluoranthene	ND	330	65							
Benzo(g,h,i)perylene	ND	330	81							
Benzo(k)fluoranthene	ND	330	33							
Benzoic acid	ND	1600	890							
Benzyl alcohol	ND	660	32							
bis(2-chloroethoxy)methane	ND	330	64							
bis(2-Chloroethyl)ether	ND	330	66							
bis(2-chloroisopropyl)ether	ND	330	76							
bis(2-ethylhexyl)phthalate	ND	330	63							
Butylbenzylphthalate	ND	330	41							
Chrysene	ND	330	84							
Di-n-butylphthalate	ND	330	51							

Certificate of Analysis

GSI Environmental, Inc.	Project Number : SATI / 6013
19200 Von Karman Ave., Suite 800	Report To : Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612	Reported : 03/18/2022

Semivolatile Organic Compounds by EPA 8270C - Quality Control (cont'd)

Analyte	Result (ug/kg wet)	PQL (ug/kg wet)	MDL (ug/kg wet)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B2B1048 - MSSEMI_NAL (continued)										
Blank (B2B1048-BLK1) - Continued						Prepared: 2/15/2022 Analyzed: 2/16/2022				
Di-n-octylphthalate	ND	330	63							
Dibenz(a,h)anthracene	ND	330	45							
Dibenzofuran	ND	330	58							
Diethyl phthalate	ND	330	58							
Dimethyl phthalate	ND	330	40							
Fluoranthene	ND	330	60							
Fluorene	ND	330	110							
Hexachlorobenzene	ND	330	55							
Hexachlorobutadiene	ND	660	53							
Hexachlorocyclopentadiene	ND	660	70							
Hexachloroethane	ND	330	94							
Indeno(1,2,3-cd)pyrene	ND	330	75							
Isophorone	ND	330	85							
N-Nitroso-di-n propylamine	ND	330	60							
N-Nitrosodiphenylamine	ND	330	32							
Naphthalene	ND	330	56							
Nitrobenzene	ND	330	57							
Pentachlorophenol	ND	1600	50							
Phenanthrene	ND	330	67							
Phenol	ND	330	34							
Pyrene	ND	330	72							
Pyridine	ND	1600	270							
Surrogate: 1,2-Dichlorobenzene-d4	*2267*			*6666.67*		*34.0*	*23 - 102*			
Surrogate: 2,4,6-Tribromophenol	*2367*			*10000.0*		*23.7*	*3 - 138*			
Surrogate: 2-Chlorophenol-d4	*3417*			*10000.0*		*34.2*	*18 - 105*			
Surrogate: 2-Fluorobiphenyl	*2587*			*6666.67*		*38.8*	*34 - 106*			
Surrogate: 2-Fluorophenol	*3216*			*10000.0*		*32.2*	*16 - 94*			
Surrogate: 4-Terphenyl-d14	*2603*			*6666.67*		*39.0*	*31 - 130*			
Surrogate: Nitrobenzene-d5	*2156*			*6666.67*		*32.3*	*23 - 102*			
Surrogate: Phenol-d6	*2979*			*10000.0*		*29.8*	*14 - 104*			
LCS (B2B1048-BS1)						Prepared: 2/15/2022 Analyzed: 2/16/2022				
1,2,4-Trichlorobenzene	4670.67	330	50	6666.67		70.1	41 - 104			
1,2-Dichlorobenzene	4193.33	330	26	6666.67		62.9	37 - 100			
1,3-Dichlorobenzene	4071.33	330	27	6666.67		61.1	36 - 98			
1,4-Dichlorobenzene	4109.33	330	27	6666.67		61.6	37 - 97			
2,4,5-Trichlorophenol	5448.00	330	30	6666.67		81.7	47 - 115			
2,4,6-Trichlorophenol	5460.00	330	35	6666.67		81.9	48 - 119			
2,4-Dichlorophenol	4840.00	1600	34	6666.67		72.6	46 - 118			
2,4-Dimethylphenol	4841.33	330	26	6666.67		72.6	41 - 114			
2,4-Dinitrophenol	3455.33	1600	86	6666.67		51.8	0 - 180			
2,4-Dinitrotoluene	5958.67	330	33	6666.67		89.4	40 - 138			
2,6-Dinitrotoluene	5747.33	330	49	6666.67		86.2	45 - 131			
2-Chloronaphthalene	5260.00	330	28	6666.67		78.9	46 - 112			
2-Chlorophenol	4164.00	330	31	6666.67		62.5	41 - 99			

Certificate of Analysis

GSI Environmental, Inc.	Project Number : SATI / 6013
19200 Von Karman Ave., Suite 800	Report To : Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612	Reported : 03/18/2022

Semivolatile Organic Compounds by EPA 8270C - Quality Control (cont'd)

Analyte	Result (ug/kg wet)	PQL (ug/kg wet)	MDL (ug/kg wet)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B2B1048 - MSSEMI_NAL (continued)										
LCS (B2B1048-BS1) - Continued						Prepared: 2/15/2022 Analyzed: 2/16/2022				
2-Methylnaphthalene	4806.67	330	27	6666.67		72.1	45 - 111			
2-Methylphenol	4377.33	330	36	6666.67		65.7	40 - 92			
2-Nitroaniline	5506.00	1600	43	6666.67		82.6	44 - 130			
2-Nitrophenol	4614.67	330	45	6666.67		69.2	34 - 114			
3,3´-Dichlorobenzidine	4786.00	660	280	6666.67		71.8	41 - 128			
3-Nitroaniline	5765.33	1600	49	6666.67		86.5	47 - 123			
4,6-Dinitro-2-methyphenol	4772.00	1600	41	6666.67		71.6	2 - 172			
4-Bromophenyl-phenylether	5872.00	330	64	6666.67		88.1	49 - 116			
4-Chloro-3-methylphenol	5228.67	660	71	6666.67		78.4	45 - 127			
4-Chloroaniline	4953.33	660	53	6666.67		74.3	50 - 106			
4-Chlorophenyl-phenylether	5799.33	330	33	6666.67		87.0	49 - 115			
4-Methylphenol	2356.00	330	57	3333.33		70.7	43 - 109			
4-Nitroaniline	5766.67	1600	37	6666.67		86.5	44 - 125			
4-Nitrophenol	4802.67	330	64	6666.67		72.0	30 - 146			
Acenaphthene	5450.67	330	43	6666.67		81.8	44 - 110			
Acenaphthylene	5600.67	330	62	6666.67		84.0	42 - 111			
Anthracene	5932.00	330	51	6666.67		89.0	41 - 117			
Benzidine (M)	3336.67	1600	1400	6666.67		50.0	0 - 189			
Benzo(a)anthracene	5992.00	330	44	6666.67		89.9	45 - 110			
Benzo(a)pyrene	6442.67	330	64	6666.67		96.6	45 - 116			
Benzo(b)fluoranthene	5989.33	330	65	6666.67		89.8	43 - 112			
Benzo(g,h,i)perylene	5558.67	330	81	6666.67		83.4	43 - 113			
Benzo(k)fluoranthene	5763.33	330	33	6666.67		86.4	42 - 114			
Benzoic acid	ND	1600	890	6666.67		NR	0 - 134			
Benzyl alcohol	4532.00	660	32	6666.67		68.0	39 - 117			
bis(2-chloroethoxy)methane	4746.00	330	64	6666.67		71.2	43 - 102			
bis(2-Chloroethyl)ether	4093.33	330	66	6666.67		61.4	38 - 99			
bis(2-chloroisopropyl)ether	3647.33	330	76	6666.67		54.7	30 - 104			
bis(2-ethylhexyl)phthalate	5142.00	330	63	6666.67		77.1	49 - 123			
Butylbenzylphthalate	5232.67	330	41	6666.67		78.5	49 - 122			
Chrysene	6009.33	330	84	6666.67		90.1	46 - 111			
Di-n-butylphthalate	6002.00	330	51	6666.67		90.0	48 - 118			
Di-n-octylphthalate	5068.00	330	63	6666.67		76.0	46 - 131			
Dibenz(a,h)anthracene	5805.33	330	45	6666.67		87.1	43 - 113			
Dibenzofuran	5632.00	330	58	6666.67		84.5	50 - 113			
Diethyl phthalate	5846.67	330	58	6666.67		87.7	50 - 115			
Dimethyl phthalate	5780.67	330	40	6666.67		86.7	48 - 112			
Fluoranthene	6300.67	330	60	6666.67		94.5	40 - 119			
Fluorene	5644.00	330	110	6666.67		84.7	41 - 117			
Hexachlorobenzene	6018.00	330	55	6666.67		90.3	46 - 123			
Hexachlorobutadiene	4554.67	660	53	6666.67		68.3	37 - 104			
Hexachlorocyclopentadiene	3670.67	660	70	6666.67		55.1	30 - 128			
Hexachloroethane	3976.67	330	94	6666.67		59.6	38 - 103			
Indeno(1,2,3-cd)pyrene	5740.00	330	75	6666.67		86.1	43 - 113			
Isophorone	5024.67	330	85	6666.67		75.4	43 - 109			

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612		Reported :	03/18/2022

Semivolatile Organic Compounds by EPA 8270C - Quality Control (cont'd)

Analyte	Result (ug/kg wet)	PQL (ug/kg wet)	MDL (ug/kg wet)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B2B1048 - MSSEMI_NAL (continued)										
LCS (B2B1048-BS1) - Continued						Prepared: 2/15/2022 Analyzed: 2/16/2022				
N-Nitroso-di-n propylamine	4735.33	330	60	6666.67		71.0	44 - 111			
N-Nitrosodiphenylamine	5916.00	330	32	6666.67		88.7	48 - 113			
Naphthalene	4591.33	330	56	6666.67		68.9	38 - 103			
Nitrobenzene	4361.33	330	57	6666.67		65.4	40 - 111			
Pentachlorophenol	3104.67	1600	50	6666.67		46.6	33 - 130			
Phenanthrene	5965.33	330	67	6666.67		89.5	42 - 119			
Phenol	4314.00	330	34	6666.67		64.7	43 - 104			
Pyrene	6400.67	330	72	6666.67		96.0	38 - 120			
Pyridine	2190.67	1600	270	6666.67		32.9	0 - 72			
Surrogate: 1,2-Dichlorobenzene-d4	*4193*			*6666.67*		*62.9*	*23 - 102*			
Surrogate: 2,4,6-Tribromophenol	*9101*			*10000.0*		*91.0*	*3 - 138*			
Surrogate: 2-Chlorophenol-d4	*6600*			*10000.0*		*66.0*	*18 - 105*			
Surrogate: 2-Fluorobiphenyl	*5513*			*6666.67*		*82.7*	*34 - 106*			
Surrogate: 2-Fluorophenol	*6207*			*10000.0*		*62.1*	*16 - 94*			
Surrogate: 4-Terphenyl-d14	*5264*			*6666.67*		*79.0*	*31 - 130*			
Surrogate: Nitrobenzene-d5	*4528*			*6666.67*		*67.9*	*23 - 102*			
Surrogate: Phenol-d6	*6655*			*10000.0*		*66.5*	*14 - 104*			

GSI ENVIRONMENTAL

CHAIN-OF-CUSTODY RECORD
Date: 14 Feb 2022
Page 1 of 1

2200184

FROM:
GSI Environmental Inc.
2211 Norfolk Suite 1000
Houston, Texas 77098
713 522 6300

PROJECT NAME: SAT1
PROJECT CONTACT: Bianca Mintz
GLOBAL ID:
PROJECT NO.: 6013
LAB CONTACT: Christine Caballero
SAMPLER(S): (PRINT) MLS

TEL:
E-MAIL: bamintz@gsi-net.com; tfword@gsi-net.com

LABORATORY: Advanced Technology Laboratories

TURNAROUND TIME:
☐ SAME DAY ☐ 24 HR ☐ 48 HR
☐ 72 HR ☐ 5 DAYS ☒ STANDARD

SPECIAL INSTRUCTIONS:
See email for method details.

REQUESTED ANALYSES
Please check box or fill in blank as needed.

LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	Unpreserved	Preserved	Field Filtered	Metals	Cr6	PCBs	PAHs	TPH	Dioxins	phthalates	Polybrominated diphenyls		Particle size
	Sample 14	2/14/22	1230	Soil	6	X			X	X	X	X	X	X	X	X		X

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
		2/14/22	2:34
Relinquished by: (Signature)	Received by: (Signature) Dannyle ETL	2/14/22	6:15 pm
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:

CERES Analytical Laboratory, Inc.
4919 Windplay Dr. Suite 1, El Dorado Hills, CA 95762

February 21, 2022 Ceres ID: 15049

Advanced Technology Laboratories
3275 Walnut Avenue
Signal Hill, CA 90755

The following report contains the results for the one soil sample received on February 16, 2022. This sample was analyzed for tetra through octa chlorinated dioxins and dibenzofurans by EPA method 8290. Routine turn-around time was provided for this work.

Sample results are reported on a dry weight basis.

This work was authorized under Advanced Technology Laboratories' Work Order # 2200184 and P.O. # SC16055_Standard TAT.

Continuing Calibration Verification (CCV) Requirements
All associated calibration verification standard(s) (CCV) met the acceptance criteria.

The report consists of a Cover Letter, Sample Inventory (Section I), Data Summary (Section II), Sample Tracking (Section VI), and Qualifiers/Abbreviations (Section VII). Raw Data (Section III), Continuing Calibration (Section IV), and Initial Calibration (Section V) are available in a full report (.pdf format) upon request.

If you have any questions regarding this report, please feel free to contact me at (916)932-5011.

Sincerely,

James M. Hedin
Director of Operations/CEO
jhedin@ceres-lab.com

Section I: Sample Inventory

Ceres Sample ID:	Sample ID	Date Received	Collection Date	&Time
15049-001	Sample 14 2200184-01	2/16/2022	2/14/2022	12:30

Section II: Data Summary

CERES Analytical Laboratory, Inc.
4919 Windplay Dr.Suite 1, El Dorado Hills, CA 95762

EPA Method 8290A

Quality Assurance Sample **Method Blank** **Project ID:** 2200184	**QC Batch #:** 2582 **Matrix:** Soil **Sample Size:** 10.00 g	**Date Received:** NA **Date Extracted:** 2/17/2022 **Date Analyzed:** 2/18/2022

Analyte	Conc. (pg/g)	MDL	RL	Qual.	Labeled Standards	% R	LCL-UCL (a)	Qualifiers
2,3,7,8-TCDD	DL= 0.153	0.172	0.500		13C-2378-TCDD	102	40-135	
12378-PeCDD	DL= 0.291	0.327	2.50		13C-12378-PeCDD	83.3	40-135	
123478-HxCDD	DL= 0.401	0.327	2.50		13C-123478-HxCDD	61.5	40-135	
123678-HxCDD	DL= 0.324	0.655	2.50		13C-123678-HxCDD	78.1	40-135	
123789-HxCDD	DL= 0.391	0.315	2.50		13C-1234678-HpCDD	112	40-135	
1234678-HpCDD	DL= 0.358	0.409	2.50		13C-OCDD	104	40-135	
OCDD	DL= 0.644	1.01	5.00		13C-2378-TCDF	87.9	40-135	
2,3,7,8-TCDF	DL= 0.157	0.0886	0.500		13C-12378-PeCDF	93.6	40-135	
12378-PeCDF	DL= 0.163	0.412	2.50		13C-23478-PeCDF	88.2	40-135	
23478-PeCDF	DL= 0.158	0.422	2.50		13C-123478-HxCDF	68.2	40-135	
123478-HxCDF	DL= 0.219	0.518	2.50		13C-123678-HxCDF	68.9	40-135	
123678-HxCDF	DL= 0.219	0.533	2.50		13C-234678-HxCDF	68.2	40-135	
234678-HxCDF	DL= 0.234	0.319	2.50		13C-123789-HxCDF	88.3	40-135	
123789-HxCDF	DL= 0.218	0.425	2.50		13C-1234678-HpCDF	105	40-135	
1234678-HpCDF	DL= 0.217	0.279	2.50		13C-1234789-HpCDF	105	40-135	
1234789-HpCDF	DL= 0.312	0.378	2.50					
OCDF	DL= 0.232	0.461	5.00					

Totals	Conc. (pg/g)	EMPC
Total TCDD	DL= 0.153	
Total PeCDD	DL= 0.291	
Total HxCDD	DL= 0.401	
Total HpCDD	DL= 0.358	
Total TCDF	DL= 0.157	
Total PeCDF	DL= 0.163	
Total HxCDF	DL= 0.234	
Total HpCDF	DL= 0.312	

CRS		
37Cl4-2378-TCDD	84.6	40-135

DL - Signifies Non-Detect (ND<) sample specific detection limit.
EMPC - Estimated Maximum Possible Concentration due to ion abundance ratio failure.
(a) - Lower control limit - Upper control limit
(b) - TEQ based on (2005) World Health Organization (WHO) Toxic Equivalent Factors.

Total Toxic Equivalency (TEQ min.) (b)**:** 0.0 pg/g

Analyst: JMH **Reviewed by: BS**

CERES Analytical Laboratory, Inc.
4919 Windplay Dr.Suite 1, El Dorado Hills, CA 95762

EPA Method 8290A

Quality Assurance Samples Laboratory Control Samples		Date Received: NA
	QC Batch #: 2582	Date Extracted: 2/17/2022
	Matrix: Soil	Date Analyzed: 2/18/2022
Project ID: 2200184	Sample Size: 10.00 g	

Analyte	LCS1 % Rec.	LCS2 % Rec.	%RSD	Labeled Standards	LCS1 % Rec.	LCS2 % Rec	Limits (a)
2,3,7,8-TCDD	86.3	88.5	1.78	13C-2378-TCDD	117	91.9	40-135
12378-PeCDD	95.2	97	1.32	13C-12378-PeCDD	98.8	79.3	40-135
123478-HxCDD	91.6	77.2	12.1	13C-123478-HxCDD	77.1	69.0	40-135
123678-HxCDD	97	107	6.93	13C-123678-HxCDD	82.5	74.2	40-135
123789-HxCDD	105	108	1.99	13C-1234678-HpCDD	127	108	40-135
1234678-HpCDD	90.8	92.2	1.08	13C-OCDD	119	83.8	40-135
OCDD	91	91.8	0.619	13C-2378-TCDF	99.6	77.7	40-135
2,3,7,8-TCDF	89.3	88.3	0.796	13C-12378-PeCDF	110	87.5	40-135
12378-PeCDF	93	92.2	0.611	13C-23478-PeCDF	102	80.7	40-135
23478-PeCDF	94.8	97.8	2.20	13C-123478-HxCDF	78.2	66.4	40-135
123478-HxCDF	101	96.8	3.00	13C-123678-HxCDF	80.9	67.6	40-135
123678-HxCDF	102	104	1.37	13C-234678-HxCDF	78.1	69.8	40-135
234678-HxCDF	100	100	0.00	13C-123789-HxCDF	101	92.0	40-135
123789-HxCDF	101	96.8	3.00	13C-1234678-HpCDF	120	91.9	40-135
1234678-HpCDF	90.2	92.8	2.01	13C-1234789-HpCDF	121	104	40-135
1234789-HpCDF	89.8	90.6	0.627				
OCDF	92.2	93.9	1.29				
				CRS			
				37Cl4-2378-TCDD	88.9	87.0	40-135

(a) Limits based on method acceptance criteria.

Analyst: JMH **Reviewed by: BS**

CERES Analytical Laboratory, Inc.
4919 Windplay Dr.Suite 1, El Dorado Hills, CA 95762

EPA Method 8290A

Client Sample ID: Sample 14 / 2200184-02					
Project ID:	2200184	**Ceres Sample ID:**	15049-001		**Date Received:** 2/16/2022
		QC Batch #:	2582		**Date Extracted:** 2/17/2022
Date Collected:	2/14/2022	**Matrix:**	Soil		**Date Analyzed:** 2/18/2022
Time Collected:	12:30	**Sample Size:**	10.34 g	**% Solids:** 97.5	

Analyte	Conc. (pg/g)	MDL	RL	Qual.	Labeled Standards	% R	LCL-UCL (a)	Qualifiers
2,3,7,8-TCDD	1.01	0.172	0.496		13C-2378-TCDD	113	40-135	
12378-PeCDD	7.35	0.327	2.48		13C-12378-PeCDD	90.5	40-135	
123478-HxCDD	7.39	0.327	2.48		13C-123478-HxCDD	73.6	40-135	
123678-HxCDD	25.2	0.655	2.48		13C-123678-HxCDD	90.1	40-135	
123789-HxCDD	19.2	0.315	2.48		13C-1234678-HpCDD	110	40-135	
1234678-HpCDD	717	0.409	2.48		13C-OCDD	82.3	40-135	
OCDD	6,340	1.01	4.96	E	13C-2378-TCDF	91.6	40-135	
2,3,7,8-TCDF	26.0	0.0886	0.496		13C-12378-PeCDF	74.1	40-135	
12378-PeCDF	13.4	0.412	2.48		13C-23478-PeCDF	94.3	40-135	
23478-PeCDF	27.4	0.422	2.48		13C-123478-HxCDF	80.4	40-135	
123478-HxCDF	35.8	0.518	2.48		13C-123678-HxCDF	86.6	40-135	
123678-HxCDF	44.3	0.533	2.48		13C-234678-HxCDF	90.6	40-135	
234678-HxCDF	53.0	0.319	2.48		13C-123789-HxCDF	114	40-135	
123789-HxCDF	29.9	0.425	2.48		13C-1234678-HpCDF	105	40-135	
1234678-HpCDF	193	0.279	2.48		13C-1234789-HpCDF	118	40-135	
1234789-HpCDF	24.4	0.378	2.48					
OCDF	305	0.461	4.96					
Totals	**Conc. (pg/g)**	**EMPC**			**CRS**			
Total TCDD	35.8				37Cl4-2378-TCDD	99.3	40-135	
Total PeCDD	82.5							
Total HxCDD	323							
Total HpCDD	1,420							
Total TCDF	726							
Total PeCDF	1,870							
Total HxCDF	1,310							
Total HpCDF	422							

DL - Signifies Non-Detect (ND<) sample specific detection limit.
EMPC - Estimated Maximum Possible Concentration due to ion abundance ratio failure.
(a) - Lower control limit - Upper control limit
(b) - TEQ based on (2005) World Health Organization (WHO) Toxic Equivalent Factors.

Total Toxic Equivalency (TEQ min.) (b)**:** 52.4 pg/g

Analyst: JMH **Reviewed by: BS**

Section VI: Sample Tracking

(E)

ADVANCED TECHNOLOGY LABORATORIES

SUBCONTRACT ORDER

Work Order: 2200184

SENDING LABORATORY:

Advanced Technology Laboratories
3275 Walnut Avenue
Signal Hill, CA 90755
Phone: 562.989.4045
Fax: 562.989.6348
Project Manager: Jerald Ancheta
(Jerald.Ancheta@atlglobal.com)
Sampler: _Client Sampler

RECEIVING LABORATORY:

Ceres Analytical Laboratory, Inc.
4919 Windplay Dr., Suite 1
El Dorado Hills, CA 95762
Phone :(916) 932-5011
Fax: (888) 932-5011
PO#: SC16055_Standard TAT

IMPORTANT : Please include Work Order # and PO # in your invoice.

QC Requirements:
- [x] Routine
- [ ] MS/MSD
- [ ] Caltrans
- [ ] Level IV*
- [ ] Dup
- [ ] Other: _____

* All Level IV sample containers (including empty ones) must be returned to ATL 30 days after receipt.
- [x] TAT Standard
- [ ] Rush _____ Days

EDD Requirements:
- [x] Standard Excel
- [ ] Geotracker EDF
- [ ] Other:

Analysis	Due	Expires	Sampled	Comments
ATL Lab#: 2200184-01 / Sample 14		**Soil**	**02/14/22 12:30**	
8290_Dioxins_Dibenzofurans_SUB		03/16/22 12:30	Glass Jar - 8 oz	
[Dioxins and Dibenzofurans]				

Prepared by: [signature] 2/15/22
Sample Control Technician — Date

Inspected by: [signature] 2/15/22
PM Lead — Date

Approved by: Victoria Michael 2/15/2022
Dedicated ATL Project Manager — Date

[signature]	2/15/22	14:00	GLS	2/15/22	14:00
Released By ATL Sample Control	Date	Time	Received By Courier	Date	Time
GLS	2/16/22	1240	[signature]	2/16/22	1240
Released By Courier	Date	Time	Received By Subcontract Laboratory	Date	Time
Released By	Date	Time	Received By	Date	Time

C:\PROGRAM FILES (X86)\PROMIUM\ELEMENT\PRINT\SCO_ATL(A.10).RPT

Sample Receipt Check List Logged by: _____(initials)

Ceres ID: 15049	Date/Time: 2/16/22 1240
Client Project ID: 2200184 SC16055_STATAT	Received Temp: 2.3 °C Acceptable: Y / N
Chain of Custody Relinquished by signed?	Y / N
Chain of Custody Received by signed?	Y / N
Custody Seals? Present?	Y / N
Intact?	Y / N
NA:	NA
Unlabeled / Illegible Samples	Y / N
Proper Containers:	Y / N
Preservation Acceptable (Chemical or Temperature)?	Y / N
Drinking Water, Sodium Thiosulfate present?	Y / N / NA
Residual Cl?	Y / N / NA
Aqueous sample pH: _____	NA

List COC discrepancies:

2/16/22

List Damaged Samples:

2/16/22

Section VII: Qualifiers/Abbreviations

J	Concentration found below the lower quantitation limit but greater than zero.
B	Analyte present in the associated Method Blank.
E	Concentration found exceeds the Calibration range of the HRGC/HRMS.
D	This analyte concentration was calculated from a dilution.
X	The concentration found is the estimated maximum possible concentration due to chlorinated diphenyl ethers present in the sample.
H	Recovery limits exceeded. See cover letter.
*****	Results taken from dilution.
I	Interference. See cover letter.
Conc.	Concentration Found
DL	Calculated Detection Limit
ND	Non-Detect
% Rec.	Percent Recovery

Petroleum Services Division
3437 Landco Dr.
Bakersfield, California 93308
Tel: 661-325-5657
Fax: 661-325-5808
www.corelab.com

March 2, 2022

Jerald Ancheta
Advanced Technology Laboratories
3275 Walnut Ave
Signal Hill, CA 90755

Subject: Laser Particle Size Analysis
Project: 2200184
CL File No: 2201173

Dear Mr. Ancheta,

The attached file presents the final particle size determination results for the soil sample submitted from your Project #2200184.

Appropriate ASTM, EPA or API methodologies were used for this project and SOP's are available on request. The sample for this project is currently in storage and will be retained for thirty days past completion of testing at no charge. At the end of thirty days, the sample will be disposed. You may contact me regarding continued storage, disposal, or return of the sample.

Thank you for this opportunity to be of service to Advanced Technology Laboratories. Please do not hesitate to contact us at (661-325-5657) if you have any questions regarding these results or if we can be of any additional service.

Sincerely,
Core Laboratories LP

Chris Florence
Sr. Core Analyst

The analyses, opinions or interpretations contained in this report are based upon observations and material supplied by the client for whose exclusive and confidential use this report has been made. The interpretations or opinions expressed represent the best judgment of Core Laboratories. Core Laboratories assumes no responsibility and makes no warranty or representations, expressed or implied, as to the productivity, proper operations or profitableness, however, of any oil, gas, coal or other mineral, property, well or sand in connection with which such report is used or relied upon for any reason whatsoever.

SIEVE and LASER PARTICLE SIZE SUMMARY

(METHODOLOGY: ASTM D422/D4464M)

Petroleum Services

Company: Advanced Technology Laboratories
Project Number: 2200184

CL File No.: 2201173
Date: 3/2/2022

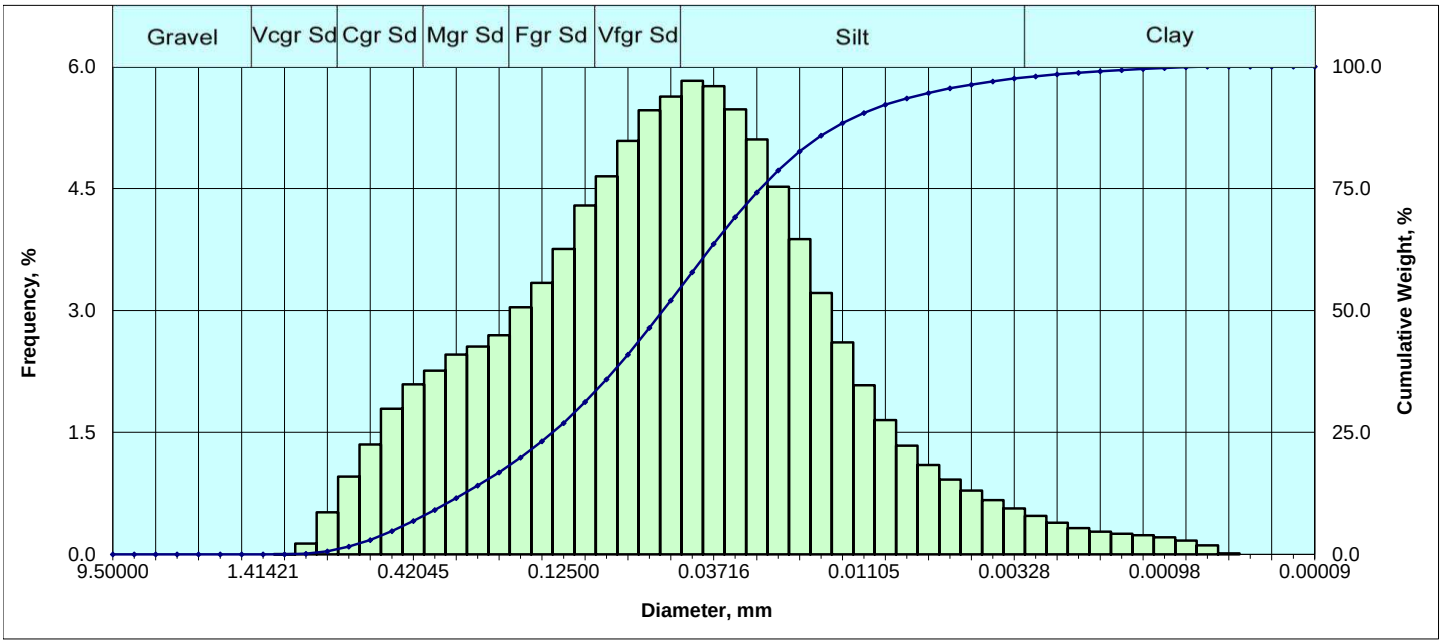
Sample ID	Grain Size Description** (Mean from Folk)	Median Grain Size, mm	Component Percentages								
			Gravel	Sand Size					Silt	Clay	Silt & Clay
				VCoarse	Coarse	Medium	Fine	VFine			
Sample 14	Silt	0.0562	0.00	0.13	4.61	9.36	12.83	19.49	50.55	3.02	53.57

**Wentworth Scale

Company: Advanced Technology Laboratories
Project Number: 2200184

CL File No.: 2201173
Sample ID: Sample 14

Sieve and Laser Particle Size Analysis



Particle Size Distribution

	Diameter [US Mesh]	Diameter [in.]	Diameter [mm]	Diameter [ϕ]	Weight % [Incl.]	Weight % [Cum.]
Gravel	3/8 in.	0.375000	9.50000	-3.25	0.000	0.00
	1/4 in.	0.250000	6.35000	-2.67	0.000	0.00
	4	0.187008	4.75000	-2.25	0.000	0.00
	6	0.131890	3.35000	-1.75	0.000	0.00
	8	0.092913	2.36000	-1.25	0.000	0.00
	10	0.078740	2.00000	-1.00	0.000	0.00
V Crse Sand	12	0.066212	1.68179	-0.75	0.000	0.00
	14	0.055678	1.41421	-0.50	0.000	0.00
	16	0.046819	1.18921	-0.25	0.002	0.00
	18	0.039370	1.00000	0.00	0.131	0.13
Coarse Sand	20	0.033106	0.84090	0.25	0.518	0.65
	25	0.027839	0.70711	0.50	0.955	1.61
	30	0.023410	0.59460	0.75	1.351	2.96
	35	0.019685	0.50000	1.00	1.791	4.75
Medium Sand	40	0.016553	0.42045	1.25	2.091	6.84
	45	0.013919	0.35355	1.50	2.260	9.10
	50	0.011705	0.29730	1.75	2.456	11.55
	60	0.009843	0.25000	2.00	2.556	14.11
Fine Sand	70	0.008277	0.21022	2.25	2.694	16.80
	80	0.006960	0.17678	2.50	3.039	19.84
	100	0.005852	0.14865	2.75	3.340	23.18
	120	0.004921	0.12500	3.00	3.756	26.94
V. Fine Sand	140	0.004138	0.10511	3.25	4.289	31.23
	170	0.003480	0.08839	3.50	4.649	35.88
	200	0.002926	0.07433	3.75	5.086	40.96
	230	0.002461	0.06250	4.00	5.463	46.43
Silt	270	0.002069	0.05256	4.25	5.631	52.06
	325	0.001740	0.04419	4.50	5.823	57.88
	400	0.001463	0.03716	4.75	5.758	63.64
	450	0.001230	0.03125	5.00	5.474	69.11
	500	0.001035	0.02628	5.25	5.105	74.22
	635	0.000870	0.02210	5.50	4.521	78.74
		0.000732	0.01858	5.75	3.876	82.62
		0.000615	0.01562	6.00	3.214	85.83
		0.000517	0.01314	6.25	2.607	88.44
		0.000435	0.01105	6.50	2.082	90.52
		0.000366	0.00929	6.75	1.654	92.17
		0.000308	0.00781	7.00	1.337	93.51
		0.000259	0.00657	7.25	1.099	94.61
		0.000217	0.00552	7.50	0.921	95.53
		0.000183	0.00465	7.75	0.783	96.31
		0.000154	0.00391	8.00	0.668	96.98
Clay		0.000129	0.00328	8.25	0.566	97.55
		0.000109	0.00276	8.50	0.473	98.02
		0.000091	0.00232	8.75	0.390	98.41
		0.000077	0.00195	9.00	0.324	98.73
		0.000065	0.00164	9.25	0.278	99.01
		0.000054	0.00138	9.50	0.253	99.26
		0.000046	0.00116	9.75	0.234	99.50
		0.000038	0.00098	10.00	0.210	99.71
		0.000032	0.00082	10.25	0.169	99.88
		0.000027	0.00069	10.50	0.111	99.99
		0.000023	0.00058	10.75	0.012	100.00
		0.000019	0.00049	11.00	0.000	100.00
		0.000016	0.00041	11.25	0.000	100.00
		0.000015	0.00038	11.50	0.000	100.00
		0.000003	0.00009	13.50	0.000	100.00

Sorting Statistics (Folk)

Parameter	Trask	Inman	Folk
Median	**Silt sized**		
(in)	0.0022	0.0022	0.0022
(mm)	0.0562	0.0562	0.0562
Mean	**Silt sized**		
(in)	0.0032	0.0024	0.0024
(mm)	0.0814	0.0620	0.0600
Sorting	**Poor**		
	2.317	1.841	1.879
Skewness	**Near symmetrical**		
	1.054	0.020	-0.033
Kurtosis	**Mesokurtic**		
	0.174	0.717	1.069

Component Percentages

Gravel	Sand	Silt	Clay	Silt + Clay
0.00	46.43	50.55	3.02	53.57

Percentile [Weight, %]	Particle Diameter [in.]	Particle Diameter [mm]	Particle Diameter [phi]
5	0.0193	0.4904	1.0280
10	0.0131	0.3329	1.5868
16	0.0087	0.2221	2.1707
25	0.0054	0.1372	2.8655
40	0.0030	0.0770	3.6991
50	0.0022	0.0562	4.1535
70	0.0012	0.0304	5.0404
75	0.0010	0.0256	5.2903
84	0.0007	0.0173	5.8525
90	0.0005	0.0116	6.4337
95	0.0002	0.0061	7.3513

**All Grain Sizes Classed Using Wentworth Scale

ADVANCED TECHNOLOGY LABORATORIES

(E)

SUBCONTRACT ORDER

Work Order: 2200184

SENDING LABORATORY:

Advanced Technology Laboratories
3275 Walnut Avenue
Signal Hill, CA 90755
Phone: 562.989.4045
Fax: 562.989.6348
Project Manager: Jerald Ancheta
(Jerald.Ancheta@atlglobal.com)
Sampler: _Client Sampler

RECEIVING LABORATORY:

Core Laboratories LP
3437 Landco Dr.
Bakersfield, CA 93308
Phone :(661) 325-5657
Fax:
PO#: SC16053_Standard TAT

IMPORTANT : Please include Work Order # and PO # in your invoice.

QC Requirements:
- [x] Routine
- [ ] MS/MSD
- [ ] Caltrans
- [ ] Level IV*
- [ ] Dup
- [ ] Other: _____

* All Level IV sample containers (including empty ones) must be returned to ATL 30 days after receipt.
- [x] TAT Standard
- [ ] Rush _____ Days

EDD Requirements:
- [x] Standard Excel
- [ ] Geotracker EDF
- [ ] Other:

Analysis	Due	Expires	Sampled	Comments
ATL Lab#: 2200184-01 / Sample 14 Particle_Size_SUB [Particle Size by Sieve & Laser Methods]		**Soil** 02/28/22 12:30	**02/14/22 12:30** Glass Jar - 8 oz	

Prepared by: [signature] 2/15/22
Sample Control Technician — Date

Inspected by: [signature] 2/15/22
PM Lead — Date

Approved by: Victoria Urchuf 2/15/22
Dedicated ATL Project Manager — Date

[signature] 2/15/22 14:00
Released By ATL Sample Control — Date — Time

GLS 2/15/22 14:00
Received By Courier — Date — Time

GLS
Released By Courier — Date — Time

[signature] 2/24/22
Received By Subcontract Laboratory — Date — Time

Released By — Date — Time

Received By — Date — Time

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WECK LABORATORIES, INC.

Certificate of Analysis

FINAL REPORT

Work Orders:	2B15102	**Report Date:**	3/17/2022
		Received Date:	2/15/2022
Project:	2200184	**Turnaround Time:**	Normal
		Phones:	(562) 989-4045
		Fax:	(562) 989-4040
Attn:	Advanced Technology Labs	**P.O. #:**	
Client:	Advanced Technology Laboratories 3275 Walnut Street Signal Hill, CA 90755	**Billing Code:**	

ELAP-CA #1132 • EPA-UCMR #CA00211 • Guam-EPA #17-008R • LACSD #10143 • NJ-DEP #CA015 • NV-DEP #NAC 445A • SCAQMD #93LA1006

This is a complete final report. The information in this report applies to the samples analyzed in accordance with the chain-of-custody document. Weck Laboratories certifies that the test results meet all requirements of TNI unless noted by qualifiers or written in the Case Narrative. This analytical report must be reproduced in its entirety.

Dear Advanced Technology Labs,

Enclosed are the results of analyses for samples received 2/15/22 with the Chain-of-Custody document. The samples were received in good condition, at 3.0 °C and on ice. All analyses met the method criteria except as noted in the case narrative or in the report with data qualifiers.

Reviewed by:

Rahul R. Nair
Project Manager

14859 Clark Avenue,City of Industry CA, 91745 | Phone: (626) 336-2139 | Fax: (626) 336-2634
www.wecklabs.com

Advanced Technology Laboratories
3275 Walnut Street
Signal Hill, CA 90755

Project Number: 2200184

Project Manager: Advanced Technology Labs

Reported:
03/17/2022 13:31

Sample Summary

Sample Name	Sampled By	Lab ID	Matrix	Sampled	Qualifiers
2200184-01	Client	2B15102-01	Solid	02/14/22 12:30	

Analyses Accreditation Summary

Analyte	CAS #	Not By NELAP	ANAB ISO 17025
GCMS SIM in Solid			
PBDE-47	5436-43-1	✓	
PBDE-99	60348-60-9	✓	
PBDE-100	189084-64-8	✓	
PBDE-153	68631-49-2	✓	
PBDE-154	207122-15-4	✓	
Perylene-d12	1520-96-3	✓	
Triphenyl phosphate	115-86-6	✓	

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Advanced Technology Laboratories
3275 Walnut Street
Signal Hill, CA 90755

Project Number: 2200184

Project Manager: Advanced Technology Labs

Reported: 03/17/2022 13:31

Sample Results

Sample: 2200184-01 — Sampled: 02/14/22 12:30 by Client

2B15102-01 (Solid)

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
PPCPs - Polybrominated Diphenyl Ethers by GC/MS SIM						
Method: GCMS SIM		**Instr:** GCMS06				
Batch ID: W2B1372 — **Preparation:** EPA 3550/Sonication		**Prepared:** 02/18/22 13:29				**Analyst:** rmr
PBDE-138	ND	100	ug/kg	5	03/08/22	M-02, M-04
PBDE-153	**220**	100	ug/kg	5	03/08/22	M-02, M-04
PBDE-154	**140**	100	ug/kg	5	03/08/22	M-02, M-04
PBDE-17	ND	100	ug/kg	5	03/08/22	M-02, M-04
PBDE-28	ND	100	ug/kg	5	03/08/22	M-02, M-04
PBDE-47	**860**	100	ug/kg	5	03/08/22	E-01, M-02, M-04
PBDE-49	ND	100	ug/kg	5	03/08/22	M-02, M-04
PBDE-85	ND	100	ug/kg	5	03/08/22	M-02, M-04
PBDE-99	**270**	100	ug/kg	5	03/08/22	M-02, M-04
Surrogate(s)						
Perylene-d12	*111%*	*Conc: 116*	*50-150*		*03/08/22*	
Triphenyl phosphate	*439%*	*Conc: 459*	*50-150*		*03/08/22*	*S-GC*

Sample Results

Sample: 2200184-01 — Sampled: 02/14/22 12:30 by Client

2B15102-01RE1 (Solid)

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
PPCPs - Polybrominated Diphenyl Ethers by GC/MS SIM						
Method: GCMS SIM		**Instr:** GCMS06				
Batch ID: W2B1372 — **Preparation:** EPA 3550/Sonication		**Prepared:** 02/18/22 13:29				**Analyst:** rmr
PBDE-100	**1300**	1000	ug/kg	50	03/08/22	M-02, M-04
Surrogate(s)						
Perylene-d12	*135%*	*Conc: 142*	*50-150*		*03/08/22*	
Triphenyl phosphate	*429%*	*Conc: 448*	*50-150*		*03/08/22*	*S-GC*

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Advanced Technology Laboratories
3275 Walnut Street
Signal Hill, CA 90755

Project Number: 2200184

Project Manager: Advanced Technology Labs

Reported: 03/17/2022 13:31

Quality Control Results

PPCPs - Polybrominated Diphenyl Ethers by GC/MS SIM

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W2B1372 - GCMS SIM										
Blank (W2B1372-BLK1)				**Prepared: 02/18/22 Analyzed: 03/08/22**						
PBDE-100	ND	2.5	ug/kg							
PBDE-138	ND	2.5	ug/kg							
PBDE-153	ND	2.5	ug/kg							
PBDE-154	ND	2.5	ug/kg							
PBDE-17	ND	2.5	ug/kg							
PBDE-28	ND	2.5	ug/kg							
PBDE-47	ND	2.5	ug/kg							
PBDE-49	ND	2.5	ug/kg							
PBDE-85	ND	2.5	ug/kg							
PBDE-99	ND	2.5	ug/kg							
Surrogate(s)										
Perylene-d12	*13.2*		*ug/kg*	*12.5*		*106*	*50-150*			
Triphenyl phosphate	*15.2*		*ug/kg*	*12.5*		*121*	*50-150*			
LCS (W2B1372-BS1)				**Prepared: 02/18/22 Analyzed: 03/08/22**						
PBDE-100	3.59	2.5	ug/kg	2.50		144	50-150			
PBDE-138	3.38	2.5	ug/kg	2.50		135	50-150			
PBDE-153	3.75	2.5	ug/kg	2.50		150	50-150			
PBDE-154	3.55	2.5	ug/kg	2.50		142	50-150			
PBDE-17	2.61	2.5	ug/kg	2.50		104	50-150			
PBDE-28	2.73	2.5	ug/kg	2.50		109	50-150			
PBDE-47	3.62	2.5	ug/kg	2.50		145	50-150			
PBDE-49	3.03	2.5	ug/kg	2.50		121	50-150			
PBDE-85	3.44	2.5	ug/kg	2.50		138	50-150			
PBDE-99	3.54	2.5	ug/kg	2.50		142	50-150			
Surrogate(s)										
Perylene-d12	*16.0*		*ug/kg*	*12.5*		*128*	*50-150*			
Triphenyl phosphate	*18.7*		*ug/kg*	*12.5*		*150*	*50-150*			
Matrix Spike (W2B1372-MS1)	**Source: 2B15102-01**			**Prepared: 02/18/22 Analyzed: 03/08/22**						
PBDE-138	54.5	120	ug/kg	23.9	22.3	135	50-150			M-02, M-04
PBDE-153	280	120	ug/kg	23.9	216	268	50-150			M-02, M-04, MS-01
PBDE-154	168	120	ug/kg	23.9	136	137	50-150			M-02, M-04
PBDE-17	31.9	120	ug/kg	23.9	9.28	94	50-150			M-02, M-04
PBDE-28	51.7	120	ug/kg	23.9	28.4	98	50-150			M-02, M-04
PBDE-47	885	120	ug/kg	23.9	863	92	50-150			E-01, M-02, M-04
PBDE-49	100	120	ug/kg	23.9	76.5	99	50-150			M-02, M-04
PBDE-85	79.9	120	ug/kg	23.9	52.8	113	50-150			M-02, M-04
PBDE-99	306	120	ug/kg	23.9	266	166	50-150			M-02, M-04, MS-01

Advanced Technology Laboratories
3275 Walnut Street
Signal Hill, CA 90755

Project Number: 2200184

Project Manager: Advanced Technology Labs

Reported: 03/17/2022 13:31

Quality Control Results

(Continued)

PPCPs - Polybrominated Diphenyl Ethers by GC/MS SIM (Continued)

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W2B1372 - GCMS SIM (Continued)										
Matrix Spike (W2B1372-MS1)	**Source: 2B15102-01**			**Prepared: 02/18/22**	**Analyzed: 03/08/22**					
Surrogate(s)										
Perylene-d12	*123*		*ug/kg*	*120*		*103*	*50-150*			
Triphenyl phosphate	*427*		*ug/kg*	*120*		*357*	*50-150*			*S-GC*
Matrix Spike (W2B1372-MS2)	**Source: 2B15102-01**			**Prepared: 02/18/22**	**Analyzed: 03/08/22**					
PBDE-100	1660	1200	ug/kg	23.9	1410	NR	50-150			M-02, M-04, MS-02
Surrogate(s)										
Perylene-d12	*153*		*ug/kg*	*120*		*128*	*50-150*			
Triphenyl phosphate	*516*		*ug/kg*	*120*		*431*	*50-150*			*S-GC*
Matrix Spike Dup (W2B1372-MSD1)	**Source: 2B15102-01**			**Prepared: 02/18/22**	**Analyzed: 03/08/22**					
PBDE-138	54.7	120	ug/kg	24.3	22.3	134	50-150	200	30	M-02, M-04, R-03
PBDE-153	228	120	ug/kg	24.3	216	49	50-150	21	30	M-02, M-04, MS-01
PBDE-154	157	120	ug/kg	24.3	136	88	50-150	7	30	M-02, M-04
PBDE-17	38.0	120	ug/kg	24.3	9.28	118	50-150	200	30	M-02, M-04, R-03
PBDE-28	57.0	120	ug/kg	24.3	28.4	118	50-150	200	30	M-02, M-04, R-03
PBDE-47	775	120	ug/kg	24.3	863	NR	50-150	13	30	E-01, M-02, M-04, MS-02
PBDE-49	102	120	ug/kg	24.3	76.5	106	50-150	200	30	M-02, M-04, R-03
PBDE-85	81.9	120	ug/kg	24.3	52.8	120	50-150	200	30	M-02, M-04, R-03
PBDE-99	275	120	ug/kg	24.3	266	36	50-150	11	30	M-02, M-04, MS-01
Surrogate(s)										
Perylene-d12	*164*		*ug/kg*	*121*		*135*	*50-150*			
Triphenyl phosphate	*569*		*ug/kg*	*121*		*469*	*50-150*			*S-GC*
Matrix Spike Dup (W2B1372-MSD2)	**Source: 2B15102-01**			**Prepared: 02/18/22**	**Analyzed: 03/08/22**					
PBDE-100	1020	1200	ug/kg	24.3	1410	NR	50-150	48	30	M-02, M-04, MS-02
Surrogate(s)										
Perylene-d12	*179*		*ug/kg*	*121*		*147*	*50-150*			
Triphenyl phosphate	*514*		*ug/kg*	*121*		*424*	*50-150*			*S-GC*

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Advanced Technology Laboratories
3275 Walnut Street
Signal Hill, CA 90755

Project Number: 2200184

Project Manager: Advanced Technology Labs

Reported:
03/17/2022 13:31

Notes and Definitions

Item	Definition
E-01	The concentration indicated for this analyte is an estimated value above the calibration range.
M-02	Due to the nature of matrix interferences, sample was diluted prior to preparation. The MDL and MRL were raised due to the dilution.
M-04	Due to the nature of matrix interferences, sample extract was diluted prior to analysis. The MDL and MRL were raised due to the dilution.
MS-01	The spike recovery for this QC sample is outside of established control limits possibly due to sample matrix interference.
MS-02	The RPD and/or percent recovery for this QC spike sample cannot be accurately calculated due to the high concentration of analyte inherent in the sample.
R-03	The RPD is not applicable for result below the reporting limit (either ND or J value).
S-GC	Surrogate recovery outside of control limits due to a possible matrix effect . The data was accepted based on valid recovery of the remaining surrogate.
%REC	Percent Recovery
Dil	Dilution
MRL	The minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. The MRL is also known as Limit of Quantitation (LOQ)
ND	NOT DETECTED at or above the Method Reporting Limit (MRL). If Method Detection Limit (MDL) is reported, then ND means not detected at or above the MDL.
RPD	Relative Percent Difference
Source	Sample that was matrix spiked or duplicated.

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

All results are expressed on wet weight basis unless otherwise specified.

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.

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March 10, 2022

Timothy Wood/ Vinnie Robino/Josh Voss
GSI Environmental, Inc.
19200 Von Karman Ave., Suite 800
Irvine, CA 92612
Tel: (949) 679-1070
Fax:

ELAP No.: 1838
CSDLAC No.: 10196
ORELAP No.: CA300003

Re: ATL Work Order Number : 2200315
Client Reference : SA Terminal Island (SATI) / 6013

Enclosed are the results for sample(s) received on March 08, 2022 by Advanced Technology Laboratories. The sample(s) are tested for the parameters as indicated on the enclosed chain of custody in accordance with applicable laboratory certifications. The laboratory results contained in this report specifically pertains to the sample(s) submitted.

Thank you for the opportunity to serve the needs of your company. If you have any questions, please feel free to contact me or Project.Management@atlglobal.com.

Sincerely,

Victoria Michel

for

Victoria Michel, Project Assistant
Victoria.Michel@atlglobal.com
Authorized to Release on 03/10/22 17:59 on Behalf of

for

Amy Leung
Laboratory Director

The test results in this report relate exclusively to the samples as received by the laboratory, and meet the requirements of the methodology under which they were reported; any exceptions are noted within the report and/ or case narrative.

The cover letter/ signature page and the case narrative are integral parts of this analytical report; the absence of any portion of the report renders the report invalid. This report shall not be reproduced except in full, and shall have the express written approval of the laboratory, and the original client firm to do so

.

The electronic signature on this report is signed by an authorized signatory of Advanced Technology Laboratories, and is intended to be legally binding as the equivalent of a handwritten signature.

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SA Terminal Island (SATI) / 6013
19200 Von Karman Ave., Suite 800		Report To :	Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612		Reported :	03/10/2022

SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Sample 15	2200315-01	Soil	3/08/22 7:20	3/08/22 14:50
Sample 16	2200315-02	Soil	3/08/22 7:45	3/08/22 14:50
Sample 17	2200315-03	Soil	3/08/22 8:00	3/08/22 14:50
Sample 18	2200315-04	Soil	3/08/22 8:20	3/08/22 14:50

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SA Terminal Island (SATI) / 6013
19200 Von Karman Ave., Suite 800		Report To :	Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612		Reported :	03/10/2022

Notes and Definitions

S4	Surrogate was diluted out.
M6	Matrix spike analyte was diluted out.
M3	Matrix spike recovery outside of acceptance limit due to disproportionate concentration of the analyte to spike level. The analytical batch was validated by the laboratory control sample.
M2	Matrix spike recovery outside of acceptance limit due to possible matrix interference. The analytical batch was validated by the laboratory control sample.
E	Result value is above quantitation range and therefore, estimated.
D10	Sample required dilution due to dark sample
ND	Analyte is not detected at or above the Practical Quantitation Limit (PQL). When client requests quantitation against MDL, analyte is not detected at or above the Method Detection Limit (MDL)
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
NR	Not Reported
RPD	Relative Percent Difference
CA2	CA-ELAP (CDPH)
OR1	OR-NELAP (OSPHL)

Notes:
(1) The reported MDL and PQL are based on prep ratio variation and analytical dilution.
(2) The suffix [2C] of specific analytes signifies that the reported result is taken from the instrument's second column.
(3) Results are wet unless otherwise specified.

Percent Moisture

Analyte: Percent Solids

Analyst: LN

Laboratory ID	Client Sample ID	Result	Units	PQL	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
2200315-01	Sample 15	**92**	% by Weight	0.10	1	B2C1048	03/09/2022	03/09/22 17:30	
2200315-02	Sample 16	**99**	% by Weight	0.10	1	B2C1048	03/09/2022	03/09/22 17:30	
2200315-03	Sample 17	**99**	% by Weight	0.10	1	B2C1048	03/09/2022	03/09/22 17:30	
2200315-04	Sample 18	**99**	% by Weight	0.10	1	B2C1048	03/09/2022	03/09/22 17:30	

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SA Terminal Island (SATI) / 6013
19200 Von Karman Ave., Suite 800		Report To :	Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612		Reported :	03/10/2022

Hexavalent Chromium by EPA 7196A/3060A

Analyte: Hexavalent Chromium **Analyst: JF**

Laboratory ID	Client Sample ID	Result	Units	PQL	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
2200315-01	Sample 15	**12**	mg/kg dry	1.1	1	B2C1043	03/09/2022	03/09/22 16:45	
2200315-02	Sample 16	**33**	mg/kg dry	1.0	1	B2C1043	03/09/2022	03/09/22 16:45	
2200315-03	Sample 17	**8.6**	mg/kg dry	1.0	1	B2C1043	03/09/2022	03/09/22 16:45	
2200315-04	Sample 18	**12**	mg/kg dry	1.0	1	B2C1043	03/09/2022	03/09/22 16:45	

Mercury by AA (Cold Vapor) EPA 7471A

Analyte: Mercury **Analyst: AEG**

Laboratory ID	Client Sample ID	Result	Units	PQL	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
2200315-02	Sample 16	**0.30**	mg/kg dry	0.10	1	B2C1030	03/09/2022	03/09/22 12:59	
2200315-03	Sample 17	**0.13**	mg/kg dry	0.10	1	B2C1030	03/09/2022	03/09/22 13:02	
2200315-04	Sample 18	**0.46**	mg/kg dry	0.10	1	B2C1030	03/09/2022	03/09/22 13:05	

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SA Terminal Island (SATI) / 6013
19200 Von Karman Ave., Suite 800		Report To :	Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612		Reported :	03/10/2022

Client Sample ID: Sample 15
Lab ID: 2200315-01

Title 22 Metals by ICP-AES EPA 6010B

Analyst: WT

Analyte	Result (mg/kg dry)	PQL (mg/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	**28**	2.2	1	B2C1032	03/09/2022	03/09/22 14:14	
Arsenic	**17**	1.1	1	B2C1032	03/09/2022	03/09/22 14:14	
Barium	**770**	1.1	1	B2C1032	03/09/2022	03/09/22 14:14	
Beryllium	**1.7**	1.1	1	B2C1032	03/09/2022	03/09/22 14:14	
Cadmium	**21**	1.1	1	B2C1032	03/09/2022	03/09/22 14:14	
Chromium	**230**	1.1	1	B2C1032	03/09/2022	03/09/22 14:14	
Cobalt	**37**	1.1	1	B2C1032	03/09/2022	03/09/22 14:14	
Copper	**860**	2.2	1	B2C1032	03/09/2022	03/09/22 14:14	
Lead	**6200**	1.1	1	B2C1032	03/09/2022	03/09/22 14:14	E
Molybdenum	**97**	1.1	1	B2C1032	03/09/2022	03/09/22 14:14	
Nickel	**220**	1.1	1	B2C1032	03/09/2022	03/09/22 14:14	
Selenium	**23**	1.1	1	B2C1032	03/09/2022	03/09/22 14:14	
Silver	**3.0**	1.1	1	B2C1032	03/09/2022	03/09/22 14:14	
Thallium	ND	1.1	1	B2C1032	03/09/2022	03/09/22 14:14	
Vanadium	**58**	1.1	1	B2C1032	03/09/2022	03/09/22 14:14	
Zinc	**3000**	54	50	B2C1032	03/09/2022	03/09/22 15:14	

Diesel and Oil Range Organics by EPA 8015B

Analyst: JV

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	**1100**	100	10	B2C1020	03/08/2022	03/09/22 01:40	D10
ORO	**2400**	100	10	B2C1020	03/08/2022	03/09/22 01:40	D10
Surrogate: p-Terphenyl	*169 %*	*62 - 141*		B2C1020	03/08/2022	*03/09/22 01:40*	S4

Polychlorinated Biphenyls by EPA 8082

Analyst: KL

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aroclor 1016	ND	52	1	B2C1010	03/08/2022	03/09/22 17:34	
Aroclor 1221	ND	52	1	B2C1010	03/08/2022	03/09/22 17:34	
Aroclor 1232	ND	52	1	B2C1010	03/08/2022	03/09/22 17:34	
Aroclor 1242	**880**	52	1	B2C1010	03/08/2022	03/09/22 17:34	
Aroclor 1248	ND	52	1	B2C1010	03/08/2022	03/09/22 17:34	
Aroclor 1254	**840**	52	1	B2C1010	03/08/2022	03/09/22 17:34	
Aroclor 1260	**520**	52	1	B2C1010	03/08/2022	03/09/22 17:34	
Surrogate: Decachlorobiphenyl	*61.3 %*	*0 - 87*		B2C1010	03/08/2022	*03/09/22 17:34*	
Surrogate: Tetrachloro-m-xylene	*41.6 %*	*0 - 103*		B2C1010	03/08/2022	*03/09/22 17:34*	

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SA Terminal Island (SATI) / 6013
19200 Von Karman Ave., Suite 800		Report To :	Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612		Reported :	03/10/2022

Client Sample ID: Sample 15
Lab ID: 2200315-01

Semivolatile Organic Compounds by EPA 8270C **Analyst: EB**

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,2,4-Trichlorobenzene	ND	36000	100	B2C1021	03/08/2022	03/09/22 13:09	D10
1,2-Dichlorobenzene	ND	36000	100	B2C1021	03/08/2022	03/09/22 13:09	D10
1,3-Dichlorobenzene	ND	36000	100	B2C1021	03/08/2022	03/09/22 13:09	D10
1,4-Dichlorobenzene	ND	36000	100	B2C1021	03/08/2022	03/09/22 13:09	D10
2,4,5-Trichlorophenol	ND	36000	100	B2C1021	03/08/2022	03/09/22 13:09	D10
2,4,6-Trichlorophenol	ND	36000	100	B2C1021	03/08/2022	03/09/22 13:09	D10
2,4-Dichlorophenol	ND	180000	100	B2C1021	03/08/2022	03/09/22 13:09	D10
2,4-Dimethylphenol	ND	36000	100	B2C1021	03/08/2022	03/09/22 13:09	D10
2,4-Dinitrophenol	ND	180000	100	B2C1021	03/08/2022	03/09/22 13:09	D10
2,4-Dinitrotoluene	ND	36000	100	B2C1021	03/08/2022	03/09/22 13:09	D10
2,6-Dinitrotoluene	ND	36000	100	B2C1021	03/08/2022	03/09/22 13:09	D10
2-Chloronaphthalene	ND	36000	100	B2C1021	03/08/2022	03/09/22 13:09	D10
2-Chlorophenol	ND	36000	100	B2C1021	03/08/2022	03/09/22 13:09	D10
2-Methylnaphthalene	ND	36000	100	B2C1021	03/08/2022	03/09/22 13:09	D10
2-Methylphenol	ND	36000	100	B2C1021	03/08/2022	03/09/22 13:09	D10
2-Nitroaniline	ND	180000	100	B2C1021	03/08/2022	03/09/22 13:09	D10
2-Nitrophenol	ND	36000	100	B2C1021	03/08/2022	03/09/22 13:09	D10
3,3´-Dichlorobenzidine	ND	72000	100	B2C1021	03/08/2022	03/09/22 13:09	D10
3-Nitroaniline	ND	180000	100	B2C1021	03/08/2022	03/09/22 13:09	D10
4,6-Dinitro-2-methyphenol	ND	180000	100	B2C1021	03/08/2022	03/09/22 13:09	D10
4-Bromophenyl-phenylether	ND	36000	100	B2C1021	03/08/2022	03/09/22 13:09	D10
4-Chloro-3-methylphenol	ND	72000	100	B2C1021	03/08/2022	03/09/22 13:09	D10
4-Chloroaniline	ND	72000	100	B2C1021	03/08/2022	03/09/22 13:09	D10
4-Chlorophenyl-phenylether	ND	36000	100	B2C1021	03/08/2022	03/09/22 13:09	D10
4-Methylphenol	ND	36000	100	B2C1021	03/08/2022	03/09/22 13:09	D10
4-Nitroaniline	ND	180000	100	B2C1021	03/08/2022	03/09/22 13:09	D10
4-Nitrophenol	ND	36000	100	B2C1021	03/08/2022	03/09/22 13:09	D10
Acenaphthene	ND	36000	100	B2C1021	03/08/2022	03/09/22 13:09	D10
Acenaphthylene	ND	36000	100	B2C1021	03/08/2022	03/09/22 13:09	D10
Anthracene	ND	36000	100	B2C1021	03/08/2022	03/09/22 13:09	D10
Benzidine (M)	ND	180000	100	B2C1021	03/08/2022	03/09/22 13:09	D10
Benzo(a)anthracene	ND	36000	100	B2C1021	03/08/2022	03/09/22 13:09	D10
Benzo(a)pyrene	ND	36000	100	B2C1021	03/08/2022	03/09/22 13:09	D10
Benzo(b)fluoranthene	ND	36000	100	B2C1021	03/08/2022	03/09/22 13:09	D10
Benzo(g,h,i)perylene	ND	36000	100	B2C1021	03/08/2022	03/09/22 13:09	D10
Benzo(k)fluoranthene	ND	36000	100	B2C1021	03/08/2022	03/09/22 13:09	D10
Benzoic acid	ND	180000	100	B2C1021	03/08/2022	03/09/22 13:09	D10
Benzyl alcohol	ND	72000	100	B2C1021	03/08/2022	03/09/22 13:09	D10
bis(2-chloroethoxy)methane	ND	36000	100	B2C1021	03/08/2022	03/09/22 13:09	D10
bis(2-Chloroethyl)ether	ND	36000	100	B2C1021	03/08/2022	03/09/22 13:09	D10
bis(2-chloroisopropyl)ether	ND	36000	100	B2C1021	03/08/2022	03/09/22 13:09	D10

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SA Terminal Island (SATI) / 6013
19200 Von Karman Ave., Suite 800		Report To :	Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612		Reported :	03/10/2022

Client Sample ID: Sample 15
Lab ID: 2200315-01

Semivolatile Organic Compounds by EPA 8270C **Analyst: EB**

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
bis(2-ethylhexyl)phthalate	ND	36000	100	B2C1021	03/08/2022	03/09/22 13:09	D10
Butylbenzylphthalate	ND	36000	100	B2C1021	03/08/2022	03/09/22 13:09	D10
Chrysene	ND	36000	100	B2C1021	03/08/2022	03/09/22 13:09	D10
Di-n-butylphthalate	ND	36000	100	B2C1021	03/08/2022	03/09/22 13:09	D10
Di-n-octylphthalate	ND	36000	100	B2C1021	03/08/2022	03/09/22 13:09	D10
Dibenz(a,h)anthracene	ND	36000	100	B2C1021	03/08/2022	03/09/22 13:09	D10
Dibenzofuran	ND	36000	100	B2C1021	03/08/2022	03/09/22 13:09	D10
Diethyl phthalate	ND	36000	100	B2C1021	03/08/2022	03/09/22 13:09	D10
Dimethyl phthalate	ND	36000	100	B2C1021	03/08/2022	03/09/22 13:09	D10
Fluoranthene	ND	36000	100	B2C1021	03/08/2022	03/09/22 13:09	D10
Fluorene	ND	36000	100	B2C1021	03/08/2022	03/09/22 13:09	D10
Hexachlorobenzene	ND	36000	100	B2C1021	03/08/2022	03/09/22 13:09	D10
Hexachlorobutadiene	ND	72000	100	B2C1021	03/08/2022	03/09/22 13:09	D10
Hexachlorocyclopentadiene	ND	72000	100	B2C1021	03/08/2022	03/09/22 13:09	D10
Hexachloroethane	ND	36000	100	B2C1021	03/08/2022	03/09/22 13:09	D10
Indeno(1,2,3-cd)pyrene	ND	36000	100	B2C1021	03/08/2022	03/09/22 13:09	D10
Isophorone	ND	36000	100	B2C1021	03/08/2022	03/09/22 13:09	D10
N-Nitroso-di-n propylamine	ND	36000	100	B2C1021	03/08/2022	03/09/22 13:09	D10
N-Nitrosodiphenylamine	ND	36000	100	B2C1021	03/08/2022	03/09/22 13:09	D10
Naphthalene	ND	36000	100	B2C1021	03/08/2022	03/09/22 13:09	D10
Nitrobenzene	ND	36000	100	B2C1021	03/08/2022	03/09/22 13:09	D10
Pentachlorophenol	ND	180000	100	B2C1021	03/08/2022	03/09/22 13:09	D10
Phenanthrene	ND	36000	100	B2C1021	03/08/2022	03/09/22 13:09	D10
Phenol	ND	36000	100	B2C1021	03/08/2022	03/09/22 13:09	D10
Pyrene	ND	36000	100	B2C1021	03/08/2022	03/09/22 13:09	D10
Pyridine	ND	180000	100	B2C1021	03/08/2022	03/09/22 13:09	D10
Surrogate: 1,2-Dichlorobenzene-d4	*0%*	*23 - 102*		B2C1021	03/08/2022	*03/09/22 13:09*	S4
Surrogate: 2,4,6-Tribromophenol	*0%*	*3 - 138*		B2C1021	03/08/2022	*03/09/22 13:09*	S4
Surrogate: 2-Chlorophenol-d4	*0%*	*18 - 105*		B2C1021	03/08/2022	*03/09/22 13:09*	S4
Surrogate: 2-Fluorobiphenyl	*0%*	*34 - 106*		B2C1021	03/08/2022	*03/09/22 13:09*	S4
Surrogate: 2-Fluorophenol	*0%*	*16 - 94*		B2C1021	03/08/2022	*03/09/22 13:09*	S4
Surrogate: 4-Terphenyl-d14	*51.0 %*	*31 - 130*		B2C1021	03/08/2022	*03/09/22 13:09*	
Surrogate: Nitrobenzene-d5	*0%*	*23 - 102*		B2C1021	03/08/2022	*03/09/22 13:09*	S4
Surrogate: Phenol-d6	*0%*	*14 - 104*		B2C1021	03/08/2022	*03/09/22 13:09*	S4

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SA Terminal Island (SATI) / 6013
19200 Von Karman Ave., Suite 800		Report To :	Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612		Reported :	03/10/2022

Client Sample ID: Sample 16
Lab ID: 2200315-02

Title 22 Metals by ICP-AES EPA 6010B

Analyst: WT

Analyte	Result (mg/kg dry)	PQL (mg/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	**3.4**	2.0	1	B2C1032	03/09/2022	03/09/22 14:18	
Arsenic	**3.3**	1.0	1	B2C1032	03/09/2022	03/09/22 14:18	
Barium	**230**	1.0	1	B2C1032	03/09/2022	03/09/22 14:18	
Beryllium	**1.0**	1.0	1	B2C1032	03/09/2022	03/09/22 14:18	
Cadmium	**2.8**	1.0	1	B2C1032	03/09/2022	03/09/22 14:18	
Chromium	**64**	1.0	1	B2C1032	03/09/2022	03/09/22 14:18	
Cobalt	**7.0**	1.0	1	B2C1032	03/09/2022	03/09/22 14:18	
Copper	**120**	2.0	1	B2C1032	03/09/2022	03/09/22 14:18	
Lead	**160**	1.0	1	B2C1032	03/09/2022	03/09/22 14:18	
Molybdenum	**9.1**	1.0	1	B2C1032	03/09/2022	03/09/22 14:18	
Nickel	**37**	1.0	1	B2C1032	03/09/2022	03/09/22 14:18	
Selenium	**5.4**	1.0	1	B2C1032	03/09/2022	03/09/22 14:18	
Silver	**1.3**	1.0	1	B2C1032	03/09/2022	03/09/22 14:18	
Thallium	ND	1.0	1	B2C1032	03/09/2022	03/09/22 14:18	
Vanadium	**31**	1.0	1	B2C1032	03/09/2022	03/09/22 14:18	
Zinc	**2500**	2.0	2	B2C1032	03/09/2022	03/09/22 15:26	

Diesel and Oil Range Organics by EPA 8015B

Analyst: JV

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	**920**	200	20	B2C1020	03/08/2022	03/09/22 02:01	D10
ORO	**1800**	200	20	B2C1020	03/08/2022	03/09/22 02:01	D10
Surrogate: p-Terphenyl	*157 %*	*62 - 141*		B2C1020	03/08/2022	*03/09/22 02:01*	S4

Polychlorinated Biphenyls by EPA 8082

Analyst: KL

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aroclor 1016	ND	48	1	B2C1010	03/08/2022	03/09/22 17:53	
Aroclor 1221	ND	48	1	B2C1010	03/08/2022	03/09/22 17:53	
Aroclor 1232	ND	48	1	B2C1010	03/08/2022	03/09/22 17:53	
Aroclor 1242	**140**	48	1	B2C1010	03/08/2022	03/09/22 17:53	
Aroclor 1248	ND	48	1	B2C1010	03/08/2022	03/09/22 17:53	
Aroclor 1254	**260**	48	1	B2C1010	03/08/2022	03/09/22 17:53	
Aroclor 1260	**98**	48	1	B2C1010	03/08/2022	03/09/22 17:53	
Surrogate: Decachlorobiphenyl	*40.6 %*	*0 - 87*		B2C1010	03/08/2022	*03/09/22 17:53*	
Surrogate: Tetrachloro-m-xylene	*43.8 %*	*0 - 103*		B2C1010	03/08/2022	*03/09/22 17:53*	

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SA Terminal Island (SATI) / 6013
19200 Von Karman Ave., Suite 800		Report To :	Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612		Reported :	03/10/2022

Client Sample ID: Sample 16
Lab ID: 2200315-02

Semivolatile Organic Compounds by EPA 8270C **Analyst: EB**

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,2,4-Trichlorobenzene	ND	33000	100	B2C1021	03/08/2022	03/09/22 13:35	D10
1,2-Dichlorobenzene	ND	33000	100	B2C1021	03/08/2022	03/09/22 13:35	D10
1,3-Dichlorobenzene	ND	33000	100	B2C1021	03/08/2022	03/09/22 13:35	D10
1,4-Dichlorobenzene	ND	33000	100	B2C1021	03/08/2022	03/09/22 13:35	D10
2,4,5-Trichlorophenol	ND	33000	100	B2C1021	03/08/2022	03/09/22 13:35	D10
2,4,6-Trichlorophenol	ND	33000	100	B2C1021	03/08/2022	03/09/22 13:35	D10
2,4-Dichlorophenol	ND	170000	100	B2C1021	03/08/2022	03/09/22 13:35	D10
2,4-Dimethylphenol	ND	33000	100	B2C1021	03/08/2022	03/09/22 13:35	D10
2,4-Dinitrophenol	ND	170000	100	B2C1021	03/08/2022	03/09/22 13:35	D10
2,4-Dinitrotoluene	ND	33000	100	B2C1021	03/08/2022	03/09/22 13:35	D10
2,6-Dinitrotoluene	ND	33000	100	B2C1021	03/08/2022	03/09/22 13:35	D10
2-Chloronaphthalene	ND	33000	100	B2C1021	03/08/2022	03/09/22 13:35	D10
2-Chlorophenol	ND	33000	100	B2C1021	03/08/2022	03/09/22 13:35	D10
2-Methylnaphthalene	ND	33000	100	B2C1021	03/08/2022	03/09/22 13:35	D10
2-Methylphenol	ND	33000	100	B2C1021	03/08/2022	03/09/22 13:35	D10
2-Nitroaniline	ND	170000	100	B2C1021	03/08/2022	03/09/22 13:35	D10
2-Nitrophenol	ND	33000	100	B2C1021	03/08/2022	03/09/22 13:35	D10
3,3´-Dichlorobenzidine	ND	66000	100	B2C1021	03/08/2022	03/09/22 13:35	D10
3-Nitroaniline	ND	170000	100	B2C1021	03/08/2022	03/09/22 13:35	D10
4,6-Dinitro-2-methyphenol	ND	170000	100	B2C1021	03/08/2022	03/09/22 13:35	D10
4-Bromophenyl-phenylether	ND	33000	100	B2C1021	03/08/2022	03/09/22 13:35	D10
4-Chloro-3-methylphenol	ND	66000	100	B2C1021	03/08/2022	03/09/22 13:35	D10
4-Chloroaniline	ND	66000	100	B2C1021	03/08/2022	03/09/22 13:35	D10
4-Chlorophenyl-phenylether	ND	33000	100	B2C1021	03/08/2022	03/09/22 13:35	D10
4-Methylphenol	ND	33000	100	B2C1021	03/08/2022	03/09/22 13:35	D10
4-Nitroaniline	ND	170000	100	B2C1021	03/08/2022	03/09/22 13:35	D10
4-Nitrophenol	ND	33000	100	B2C1021	03/08/2022	03/09/22 13:35	D10
Acenaphthene	ND	33000	100	B2C1021	03/08/2022	03/09/22 13:35	D10
Acenaphthylene	ND	33000	100	B2C1021	03/08/2022	03/09/22 13:35	D10
Anthracene	ND	33000	100	B2C1021	03/08/2022	03/09/22 13:35	D10
Benzidine (M)	ND	170000	100	B2C1021	03/08/2022	03/09/22 13:35	D10
Benzo(a)anthracene	ND	33000	100	B2C1021	03/08/2022	03/09/22 13:35	D10
Benzo(a)pyrene	ND	33000	100	B2C1021	03/08/2022	03/09/22 13:35	D10
Benzo(b)fluoranthene	ND	33000	100	B2C1021	03/08/2022	03/09/22 13:35	D10
Benzo(g,h,i)perylene	ND	33000	100	B2C1021	03/08/2022	03/09/22 13:35	D10
Benzo(k)fluoranthene	ND	33000	100	B2C1021	03/08/2022	03/09/22 13:35	D10
Benzoic acid	ND	170000	100	B2C1021	03/08/2022	03/09/22 13:35	D10
Benzyl alcohol	ND	66000	100	B2C1021	03/08/2022	03/09/22 13:35	D10
bis(2-chloroethoxy)methane	ND	33000	100	B2C1021	03/08/2022	03/09/22 13:35	D10
bis(2-Chloroethyl)ether	ND	33000	100	B2C1021	03/08/2022	03/09/22 13:35	D10
bis(2-chloroisopropyl)ether	ND	33000	100	B2C1021	03/08/2022	03/09/22 13:35	D10

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SA Terminal Island (SATI) / 6013
19200 Von Karman Ave., Suite 800		Report To :	Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612		Reported :	03/10/2022

Client Sample ID: Sample 16
Lab ID: 2200315-02

Semivolatile Organic Compounds by EPA 8270C **Analyst: EB**

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
bis(2-ethylhexyl)phthalate	ND	33000	100	B2C1021	03/08/2022	03/09/22 13:35	D10
Butylbenzylphthalate	ND	33000	100	B2C1021	03/08/2022	03/09/22 13:35	D10
Chrysene	ND	33000	100	B2C1021	03/08/2022	03/09/22 13:35	D10
Di-n-butylphthalate	ND	33000	100	B2C1021	03/08/2022	03/09/22 13:35	D10
Di-n-octylphthalate	ND	33000	100	B2C1021	03/08/2022	03/09/22 13:35	D10
Dibenz(a,h)anthracene	ND	33000	100	B2C1021	03/08/2022	03/09/22 13:35	D10
Dibenzofuran	ND	33000	100	B2C1021	03/08/2022	03/09/22 13:35	D10
Diethyl phthalate	ND	33000	100	B2C1021	03/08/2022	03/09/22 13:35	D10
Dimethyl phthalate	ND	33000	100	B2C1021	03/08/2022	03/09/22 13:35	D10
Fluoranthene	ND	33000	100	B2C1021	03/08/2022	03/09/22 13:35	D10
Fluorene	ND	33000	100	B2C1021	03/08/2022	03/09/22 13:35	D10
Hexachlorobenzene	ND	33000	100	B2C1021	03/08/2022	03/09/22 13:35	D10
Hexachlorobutadiene	ND	66000	100	B2C1021	03/08/2022	03/09/22 13:35	D10
Hexachlorocyclopentadiene	ND	66000	100	B2C1021	03/08/2022	03/09/22 13:35	D10
Hexachloroethane	ND	33000	100	B2C1021	03/08/2022	03/09/22 13:35	D10
Indeno(1,2,3-cd)pyrene	ND	33000	100	B2C1021	03/08/2022	03/09/22 13:35	D10
Isophorone	ND	33000	100	B2C1021	03/08/2022	03/09/22 13:35	D10
N-Nitroso-di-n propylamine	ND	33000	100	B2C1021	03/08/2022	03/09/22 13:35	D10
N-Nitrosodiphenylamine	ND	33000	100	B2C1021	03/08/2022	03/09/22 13:35	D10
Naphthalene	ND	33000	100	B2C1021	03/08/2022	03/09/22 13:35	D10
Nitrobenzene	ND	33000	100	B2C1021	03/08/2022	03/09/22 13:35	D10
Pentachlorophenol	ND	170000	100	B2C1021	03/08/2022	03/09/22 13:35	D10
Phenanthrene	ND	33000	100	B2C1021	03/08/2022	03/09/22 13:35	D10
Phenol	ND	33000	100	B2C1021	03/08/2022	03/09/22 13:35	D10
Pyrene	ND	33000	100	B2C1021	03/08/2022	03/09/22 13:35	D10
Pyridine	ND	170000	100	B2C1021	03/08/2022	03/09/22 13:35	D10
Surrogate: 1,2-Dichlorobenzene-d4	*0%*	*23 - 102*		B2C1021	03/08/2022	*03/09/22 13:35*	S4
Surrogate: 2,4,6-Tribromophenol	*0%*	*3 - 138*		B2C1021	03/08/2022	*03/09/22 13:35*	S4
Surrogate: 2-Chlorophenol-d4	*0%*	*18 - 105*		B2C1021	03/08/2022	*03/09/22 13:35*	S4
Surrogate: 2-Fluorobiphenyl	*11.0 %*	*34 - 106*		B2C1021	03/08/2022	*03/09/22 13:35*	S4
Surrogate: 2-Fluorophenol	*0%*	*16 - 94*		B2C1021	03/08/2022	*03/09/22 13:35*	S4
Surrogate: 4-Terphenyl-d14	*52.0 %*	*31 - 130*		B2C1021	03/08/2022	*03/09/22 13:35*	
Surrogate: Nitrobenzene-d5	*0%*	*23 - 102*		B2C1021	03/08/2022	*03/09/22 13:35*	S4
Surrogate: Phenol-d6	*0%*	*14 - 104*		B2C1021	03/08/2022	*03/09/22 13:35*	S4

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SA Terminal Island (SATI) / 6013
19200 Von Karman Ave., Suite 800		Report To :	Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612		Reported :	03/10/2022

Client Sample ID: Sample 17
Lab ID: 2200315-03

Title 22 Metals by ICP-AES EPA 6010B

Analyst: WT

Analyte	Result (mg/kg dry)	PQL (mg/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	**3.1**	2.0	1	B2C1032	03/09/2022	03/09/22 14:20	
Arsenic	**3.4**	1.0	1	B2C1032	03/09/2022	03/09/22 14:20	
Barium	**160**	1.0	1	B2C1032	03/09/2022	03/09/22 14:20	
Beryllium	ND	1.0	1	B2C1032	03/09/2022	03/09/22 14:20	
Cadmium	**2.2**	1.0	1	B2C1032	03/09/2022	03/09/22 14:20	
Chromium	**57**	1.0	1	B2C1032	03/09/2022	03/09/22 14:20	
Cobalt	**5.6**	1.0	1	B2C1032	03/09/2022	03/09/22 14:20	
Copper	**94**	2.0	1	B2C1032	03/09/2022	03/09/22 14:20	
Lead	**140**	1.0	1	B2C1032	03/09/2022	03/09/22 14:20	
Molybdenum	**7.7**	1.0	1	B2C1032	03/09/2022	03/09/22 14:20	
Nickel	**69**	1.0	1	B2C1032	03/09/2022	03/09/22 14:20	
Selenium	**5.4**	1.0	1	B2C1032	03/09/2022	03/09/22 14:20	
Silver	ND	1.0	1	B2C1032	03/09/2022	03/09/22 14:20	
Thallium	ND	1.0	1	B2C1032	03/09/2022	03/09/22 14:20	
Vanadium	**26**	1.0	1	B2C1032	03/09/2022	03/09/22 14:20	
Zinc	**2000**	1.0	1	B2C1032	03/09/2022	03/09/22 14:20	

Diesel and Oil Range Organics by EPA 8015B

Analyst: JV

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	**830**	200	20	B2C1020	03/08/2022	03/09/22 02:22	D10
ORO	**1600**	200	20	B2C1020	03/08/2022	03/09/22 02:22	D10
Surrogate: p-Terphenyl	*149 %*	*62 - 141*		B2C1020	03/08/2022	*03/09/22 02:22*	S4

Polychlorinated Biphenyls by EPA 8082

Analyst: KL

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aroclor 1016	ND	49	1	B2C1010	03/08/2022	03/09/22 18:12	
Aroclor 1221	ND	49	1	B2C1010	03/08/2022	03/09/22 18:12	
Aroclor 1232	ND	49	1	B2C1010	03/08/2022	03/09/22 18:12	
Aroclor 1242	**130**	49	1	B2C1010	03/08/2022	03/09/22 18:12	
Aroclor 1248	ND	49	1	B2C1010	03/08/2022	03/09/22 18:12	
Aroclor 1254	**210**	49	1	B2C1010	03/08/2022	03/09/22 18:12	
Aroclor 1260	**100**	49	1	B2C1010	03/08/2022	03/09/22 18:12	
Surrogate: Decachlorobiphenyl	*43.0 %*	*0 - 87*		B2C1010	03/08/2022	*03/09/22 18:12*	
Surrogate: Tetrachloro-m-xylene	*48.5 %*	*0 - 103*		B2C1010	03/08/2022	*03/09/22 18:12*	

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SA Terminal Island (SATI) / 6013
19200 Von Karman Ave., Suite 800		Report To :	Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612		Reported :	03/10/2022

Client Sample ID: Sample 17
Lab ID: 2200315-03

Semivolatile Organic Compounds by EPA 8270C **Analyst: EB**

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,2,4-Trichlorobenzene	ND	33000	100	B2C1021	03/08/2022	03/09/22 14:01	D10
1,2-Dichlorobenzene	ND	33000	100	B2C1021	03/08/2022	03/09/22 14:01	D10
1,3-Dichlorobenzene	ND	33000	100	B2C1021	03/08/2022	03/09/22 14:01	D10
1,4-Dichlorobenzene	ND	33000	100	B2C1021	03/08/2022	03/09/22 14:01	D10
2,4,5-Trichlorophenol	ND	33000	100	B2C1021	03/08/2022	03/09/22 14:01	D10
2,4,6-Trichlorophenol	ND	33000	100	B2C1021	03/08/2022	03/09/22 14:01	D10
2,4-Dichlorophenol	ND	170000	100	B2C1021	03/08/2022	03/09/22 14:01	D10
2,4-Dimethylphenol	ND	33000	100	B2C1021	03/08/2022	03/09/22 14:01	D10
2,4-Dinitrophenol	ND	170000	100	B2C1021	03/08/2022	03/09/22 14:01	D10
2,4-Dinitrotoluene	ND	33000	100	B2C1021	03/08/2022	03/09/22 14:01	D10
2,6-Dinitrotoluene	ND	33000	100	B2C1021	03/08/2022	03/09/22 14:01	D10
2-Chloronaphthalene	ND	33000	100	B2C1021	03/08/2022	03/09/22 14:01	D10
2-Chlorophenol	ND	33000	100	B2C1021	03/08/2022	03/09/22 14:01	D10
2-Methylnaphthalene	ND	33000	100	B2C1021	03/08/2022	03/09/22 14:01	D10
2-Methylphenol	ND	33000	100	B2C1021	03/08/2022	03/09/22 14:01	D10
2-Nitroaniline	ND	170000	100	B2C1021	03/08/2022	03/09/22 14:01	D10
2-Nitrophenol	ND	33000	100	B2C1021	03/08/2022	03/09/22 14:01	D10
3,3´-Dichlorobenzidine	ND	67000	100	B2C1021	03/08/2022	03/09/22 14:01	D10
3-Nitroaniline	ND	170000	100	B2C1021	03/08/2022	03/09/22 14:01	D10
4,6-Dinitro-2-methyphenol	ND	170000	100	B2C1021	03/08/2022	03/09/22 14:01	D10
4-Bromophenyl-phenylether	ND	33000	100	B2C1021	03/08/2022	03/09/22 14:01	D10
4-Chloro-3-methylphenol	ND	67000	100	B2C1021	03/08/2022	03/09/22 14:01	D10
4-Chloroaniline	ND	67000	100	B2C1021	03/08/2022	03/09/22 14:01	D10
4-Chlorophenyl-phenylether	ND	33000	100	B2C1021	03/08/2022	03/09/22 14:01	D10
4-Methylphenol	ND	33000	100	B2C1021	03/08/2022	03/09/22 14:01	D10
4-Nitroaniline	ND	170000	100	B2C1021	03/08/2022	03/09/22 14:01	D10
4-Nitrophenol	ND	33000	100	B2C1021	03/08/2022	03/09/22 14:01	D10
Acenaphthene	ND	33000	100	B2C1021	03/08/2022	03/09/22 14:01	D10
Acenaphthylene	ND	33000	100	B2C1021	03/08/2022	03/09/22 14:01	D10
Anthracene	ND	33000	100	B2C1021	03/08/2022	03/09/22 14:01	D10
Benzidine (M)	ND	170000	100	B2C1021	03/08/2022	03/09/22 14:01	D10
Benzo(a)anthracene	ND	33000	100	B2C1021	03/08/2022	03/09/22 14:01	D10
Benzo(a)pyrene	ND	33000	100	B2C1021	03/08/2022	03/09/22 14:01	D10
Benzo(b)fluoranthene	ND	33000	100	B2C1021	03/08/2022	03/09/22 14:01	D10
Benzo(g,h,i)perylene	ND	33000	100	B2C1021	03/08/2022	03/09/22 14:01	D10
Benzo(k)fluoranthene	ND	33000	100	B2C1021	03/08/2022	03/09/22 14:01	D10
Benzoic acid	ND	170000	100	B2C1021	03/08/2022	03/09/22 14:01	D10
Benzyl alcohol	ND	67000	100	B2C1021	03/08/2022	03/09/22 14:01	D10
bis(2-chloroethoxy)methane	ND	33000	100	B2C1021	03/08/2022	03/09/22 14:01	D10
bis(2-Chloroethyl)ether	ND	33000	100	B2C1021	03/08/2022	03/09/22 14:01	D10
bis(2-chloroisopropyl)ether	ND	33000	100	B2C1021	03/08/2022	03/09/22 14:01	D10

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SA Terminal Island (SATI) / 6013
19200 Von Karman Ave., Suite 800		Report To :	Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612		Reported :	03/10/2022

Client Sample ID: Sample 17
Lab ID: 2200315-03

Semivolatile Organic Compounds by EPA 8270C **Analyst: EB**

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
bis(2-ethylhexyl)phthalate	ND	33000	100	B2C1021	03/08/2022	03/09/22 14:01	D10
Butylbenzylphthalate	ND	33000	100	B2C1021	03/08/2022	03/09/22 14:01	D10
Chrysene	ND	33000	100	B2C1021	03/08/2022	03/09/22 14:01	D10
Di-n-butylphthalate	ND	33000	100	B2C1021	03/08/2022	03/09/22 14:01	D10
Di-n-octylphthalate	ND	33000	100	B2C1021	03/08/2022	03/09/22 14:01	D10
Dibenz(a,h)anthracene	ND	33000	100	B2C1021	03/08/2022	03/09/22 14:01	D10
Dibenzofuran	ND	33000	100	B2C1021	03/08/2022	03/09/22 14:01	D10
Diethyl phthalate	ND	33000	100	B2C1021	03/08/2022	03/09/22 14:01	D10
Dimethyl phthalate	ND	33000	100	B2C1021	03/08/2022	03/09/22 14:01	D10
Fluoranthene	ND	33000	100	B2C1021	03/08/2022	03/09/22 14:01	D10
Fluorene	ND	33000	100	B2C1021	03/08/2022	03/09/22 14:01	D10
Hexachlorobenzene	ND	33000	100	B2C1021	03/08/2022	03/09/22 14:01	D10
Hexachlorobutadiene	ND	67000	100	B2C1021	03/08/2022	03/09/22 14:01	D10
Hexachlorocyclopentadiene	ND	67000	100	B2C1021	03/08/2022	03/09/22 14:01	D10
Hexachloroethane	ND	33000	100	B2C1021	03/08/2022	03/09/22 14:01	D10
Indeno(1,2,3-cd)pyrene	ND	33000	100	B2C1021	03/08/2022	03/09/22 14:01	D10
Isophorone	ND	33000	100	B2C1021	03/08/2022	03/09/22 14:01	D10
N-Nitroso-di-n propylamine	ND	33000	100	B2C1021	03/08/2022	03/09/22 14:01	D10
N-Nitrosodiphenylamine	ND	33000	100	B2C1021	03/08/2022	03/09/22 14:01	D10
Naphthalene	ND	33000	100	B2C1021	03/08/2022	03/09/22 14:01	D10
Nitrobenzene	ND	33000	100	B2C1021	03/08/2022	03/09/22 14:01	D10
Pentachlorophenol	ND	170000	100	B2C1021	03/08/2022	03/09/22 14:01	D10
Phenanthrene	ND	33000	100	B2C1021	03/08/2022	03/09/22 14:01	D10
Phenol	ND	33000	100	B2C1021	03/08/2022	03/09/22 14:01	D10
Pyrene	ND	33000	100	B2C1021	03/08/2022	03/09/22 14:01	D10
Pyridine	ND	170000	100	B2C1021	03/08/2022	03/09/22 14:01	D10
Surrogate: 1,2-Dichlorobenzene-d4	*0%*	*23 - 102*		B2C1021	03/08/2022	*03/09/22 14:01*	S4
Surrogate: 2,4,6-Tribromophenol	*0%*	*3 - 138*		B2C1021	03/08/2022	*03/09/22 14:01*	S4
Surrogate: 2-Chlorophenol-d4	*0%*	*18 - 105*		B2C1021	03/08/2022	*03/09/22 14:01*	S4
Surrogate: 2-Fluorobiphenyl	*9.00 %*	*34 - 106*		B2C1021	03/08/2022	*03/09/22 14:01*	S4
Surrogate: 2-Fluorophenol	*0%*	*16 - 94*		B2C1021	03/08/2022	*03/09/22 14:01*	S4
Surrogate: 4-Terphenyl-d14	*50.0 %*	*31 - 130*		B2C1021	03/08/2022	*03/09/22 14:01*	
Surrogate: Nitrobenzene-d5	*0%*	*23 - 102*		B2C1021	03/08/2022	*03/09/22 14:01*	S4
Surrogate: Phenol-d6	*0%*	*14 - 104*		B2C1021	03/08/2022	*03/09/22 14:01*	S4

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SA Terminal Island (SATI) / 6013
19200 Von Karman Ave., Suite 800		Report To :	Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612		Reported :	03/10/2022

Client Sample ID: Sample 18
Lab ID: 2200315-04

Title 22 Metals by ICP-AES EPA 6010B

Analyst: WT

Analyte	Result (mg/kg dry)	PQL (mg/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	**4.4**	2.0	1	B2C1032	03/09/2022	03/09/22 14:21	
Arsenic	**4.4**	1.0	1	B2C1032	03/09/2022	03/09/22 14:21	
Barium	**200**	1.0	1	B2C1032	03/09/2022	03/09/22 14:21	
Beryllium	**1.1**	1.0	1	B2C1032	03/09/2022	03/09/22 14:21	
Cadmium	**3.7**	1.0	1	B2C1032	03/09/2022	03/09/22 14:21	
Chromium	**80**	1.0	1	B2C1032	03/09/2022	03/09/22 14:21	
Cobalt	**8.6**	1.0	1	B2C1032	03/09/2022	03/09/22 14:21	
Copper	**130**	2.0	1	B2C1032	03/09/2022	03/09/22 14:21	
Lead	**230**	1.0	1	B2C1032	03/09/2022	03/09/22 14:21	
Molybdenum	**11**	1.0	1	B2C1032	03/09/2022	03/09/22 14:21	
Nickel	**42**	1.0	1	B2C1032	03/09/2022	03/09/22 14:21	
Selenium	**6.2**	1.0	1	B2C1032	03/09/2022	03/09/22 14:21	
Silver	**1.3**	1.0	1	B2C1032	03/09/2022	03/09/22 14:21	
Thallium	ND	1.0	1	B2C1032	03/09/2022	03/09/22 14:21	
Vanadium	**35**	1.0	1	B2C1032	03/09/2022	03/09/22 14:21	
Zinc	**220**	51	50	B2C1032	03/09/2022	03/09/22 16:05	

Diesel and Oil Range Organics by EPA 8015B

Analyst: JV

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	**590**	200	20	B2C1020	03/08/2022	03/09/22 02:43	D10
ORO	**1000**	200	20	B2C1020	03/08/2022	03/09/22 02:43	D10
Surrogate: p-Terphenyl	*158 %*	*62 - 141*		B2C1020	03/08/2022	*03/09/22 02:43*	S4

Polychlorinated Biphenyls by EPA 8082

Analyst: KL

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aroclor 1016	ND	49	1	B2C1010	03/08/2022	03/09/22 18:31	
Aroclor 1221	ND	49	1	B2C1010	03/08/2022	03/09/22 18:31	
Aroclor 1232	ND	49	1	B2C1010	03/08/2022	03/09/22 18:31	
Aroclor 1242	**130**	49	1	B2C1010	03/08/2022	03/09/22 18:31	
Aroclor 1248	ND	49	1	B2C1010	03/08/2022	03/09/22 18:31	
Aroclor 1254	**210**	49	1	B2C1010	03/08/2022	03/09/22 18:31	
Aroclor 1260	**96**	49	1	B2C1010	03/08/2022	03/09/22 18:31	
Surrogate: Decachlorobiphenyl	*40.3 %*	*0 - 87*		B2C1010	03/08/2022	*03/09/22 18:31*	
Surrogate: Tetrachloro-m-xylene	*43.2 %*	*0 - 103*		B2C1010	03/08/2022	*03/09/22 18:31*	

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SA Terminal Island (SATI) / 6013
19200 Von Karman Ave., Suite 800		Report To :	Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612		Reported :	03/10/2022

Client Sample ID: Sample 18
Lab ID: 2200315-04

Semivolatile Organic Compounds by EPA 8270C **Analyst: EB**

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,2,4-Trichlorobenzene	ND	33000	100	B2C1021	03/08/2022	03/09/22 14:27	D10
1,2-Dichlorobenzene	ND	33000	100	B2C1021	03/08/2022	03/09/22 14:27	D10
1,3-Dichlorobenzene	ND	33000	100	B2C1021	03/08/2022	03/09/22 14:27	D10
1,4-Dichlorobenzene	ND	33000	100	B2C1021	03/08/2022	03/09/22 14:27	D10
2,4,5-Trichlorophenol	ND	33000	100	B2C1021	03/08/2022	03/09/22 14:27	D10
2,4,6-Trichlorophenol	ND	33000	100	B2C1021	03/08/2022	03/09/22 14:27	D10
2,4-Dichlorophenol	ND	170000	100	B2C1021	03/08/2022	03/09/22 14:27	D10
2,4-Dimethylphenol	ND	33000	100	B2C1021	03/08/2022	03/09/22 14:27	D10
2,4-Dinitrophenol	ND	170000	100	B2C1021	03/08/2022	03/09/22 14:27	D10
2,4-Dinitrotoluene	ND	33000	100	B2C1021	03/08/2022	03/09/22 14:27	D10
2,6-Dinitrotoluene	ND	33000	100	B2C1021	03/08/2022	03/09/22 14:27	D10
2-Chloronaphthalene	ND	33000	100	B2C1021	03/08/2022	03/09/22 14:27	D10
2-Chlorophenol	ND	33000	100	B2C1021	03/08/2022	03/09/22 14:27	D10
2-Methylnaphthalene	ND	33000	100	B2C1021	03/08/2022	03/09/22 14:27	D10
2-Methylphenol	ND	33000	100	B2C1021	03/08/2022	03/09/22 14:27	D10
2-Nitroaniline	ND	170000	100	B2C1021	03/08/2022	03/09/22 14:27	D10
2-Nitrophenol	ND	33000	100	B2C1021	03/08/2022	03/09/22 14:27	D10
3,3´-Dichlorobenzidine	ND	67000	100	B2C1021	03/08/2022	03/09/22 14:27	D10
3-Nitroaniline	ND	170000	100	B2C1021	03/08/2022	03/09/22 14:27	D10
4,6-Dinitro-2-methyphenol	ND	170000	100	B2C1021	03/08/2022	03/09/22 14:27	D10
4-Bromophenyl-phenylether	ND	33000	100	B2C1021	03/08/2022	03/09/22 14:27	D10
4-Chloro-3-methylphenol	ND	67000	100	B2C1021	03/08/2022	03/09/22 14:27	D10
4-Chloroaniline	ND	67000	100	B2C1021	03/08/2022	03/09/22 14:27	D10
4-Chlorophenyl-phenylether	ND	33000	100	B2C1021	03/08/2022	03/09/22 14:27	D10
4-Methylphenol	ND	33000	100	B2C1021	03/08/2022	03/09/22 14:27	D10
4-Nitroaniline	ND	170000	100	B2C1021	03/08/2022	03/09/22 14:27	D10
4-Nitrophenol	ND	33000	100	B2C1021	03/08/2022	03/09/22 14:27	D10
Acenaphthene	ND	33000	100	B2C1021	03/08/2022	03/09/22 14:27	D10
Acenaphthylene	ND	33000	100	B2C1021	03/08/2022	03/09/22 14:27	D10
Anthracene	ND	33000	100	B2C1021	03/08/2022	03/09/22 14:27	D10
Benzidine (M)	ND	170000	100	B2C1021	03/08/2022	03/09/22 14:27	D10
Benzo(a)anthracene	ND	33000	100	B2C1021	03/08/2022	03/09/22 14:27	D10
Benzo(a)pyrene	ND	33000	100	B2C1021	03/08/2022	03/09/22 14:27	D10
Benzo(b)fluoranthene	ND	33000	100	B2C1021	03/08/2022	03/09/22 14:27	D10
Benzo(g,h,i)perylene	ND	33000	100	B2C1021	03/08/2022	03/09/22 14:27	D10
Benzo(k)fluoranthene	ND	33000	100	B2C1021	03/08/2022	03/09/22 14:27	D10
Benzoic acid	ND	170000	100	B2C1021	03/08/2022	03/09/22 14:27	D10
Benzyl alcohol	ND	67000	100	B2C1021	03/08/2022	03/09/22 14:27	D10
bis(2-chloroethoxy)methane	ND	33000	100	B2C1021	03/08/2022	03/09/22 14:27	D10
bis(2-Chloroethyl)ether	ND	33000	100	B2C1021	03/08/2022	03/09/22 14:27	D10
bis(2-chloroisopropyl)ether	ND	33000	100	B2C1021	03/08/2022	03/09/22 14:27	D10

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SA Terminal Island (SATI) / 6013
19200 Von Karman Ave., Suite 800		Report To :	Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612		Reported :	03/10/2022

Client Sample ID: Sample 18
Lab ID: 2200315-04

Semivolatile Organic Compounds by EPA 8270C **Analyst: EB**

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
bis(2-ethylhexyl)phthalate	ND	33000	100	B2C1021	03/08/2022	03/09/22 14:27	D10
Butylbenzylphthalate	ND	33000	100	B2C1021	03/08/2022	03/09/22 14:27	D10
Chrysene	ND	33000	100	B2C1021	03/08/2022	03/09/22 14:27	D10
Di-n-butylphthalate	ND	33000	100	B2C1021	03/08/2022	03/09/22 14:27	D10
Di-n-octylphthalate	ND	33000	100	B2C1021	03/08/2022	03/09/22 14:27	D10
Dibenz(a,h)anthracene	ND	33000	100	B2C1021	03/08/2022	03/09/22 14:27	D10
Dibenzofuran	ND	33000	100	B2C1021	03/08/2022	03/09/22 14:27	D10
Diethyl phthalate	ND	33000	100	B2C1021	03/08/2022	03/09/22 14:27	D10
Dimethyl phthalate	ND	33000	100	B2C1021	03/08/2022	03/09/22 14:27	D10
Fluoranthene	ND	33000	100	B2C1021	03/08/2022	03/09/22 14:27	D10
Fluorene	ND	33000	100	B2C1021	03/08/2022	03/09/22 14:27	D10
Hexachlorobenzene	ND	33000	100	B2C1021	03/08/2022	03/09/22 14:27	D10
Hexachlorobutadiene	ND	67000	100	B2C1021	03/08/2022	03/09/22 14:27	D10
Hexachlorocyclopentadiene	ND	67000	100	B2C1021	03/08/2022	03/09/22 14:27	D10
Hexachloroethane	ND	33000	100	B2C1021	03/08/2022	03/09/22 14:27	D10
Indeno(1,2,3-cd)pyrene	ND	33000	100	B2C1021	03/08/2022	03/09/22 14:27	D10
Isophorone	ND	33000	100	B2C1021	03/08/2022	03/09/22 14:27	D10
N-Nitroso-di-n propylamine	ND	33000	100	B2C1021	03/08/2022	03/09/22 14:27	D10
N-Nitrosodiphenylamine	ND	33000	100	B2C1021	03/08/2022	03/09/22 14:27	D10
Naphthalene	ND	33000	100	B2C1021	03/08/2022	03/09/22 14:27	D10
Nitrobenzene	ND	33000	100	B2C1021	03/08/2022	03/09/22 14:27	D10
Pentachlorophenol	ND	170000	100	B2C1021	03/08/2022	03/09/22 14:27	D10
Phenanthrene	ND	33000	100	B2C1021	03/08/2022	03/09/22 14:27	D10
Phenol	ND	33000	100	B2C1021	03/08/2022	03/09/22 14:27	D10
Pyrene	ND	33000	100	B2C1021	03/08/2022	03/09/22 14:27	D10
Pyridine	ND	170000	100	B2C1021	03/08/2022	03/09/22 14:27	D10
Surrogate: 1,2-Dichlorobenzene-d4	*0%*	*23 - 102*		B2C1021	03/08/2022	*03/09/22 14:27*	S4
Surrogate: 2,4,6-Tribromophenol	*0%*	*3 - 138*		B2C1021	03/08/2022	*03/09/22 14:27*	S4
Surrogate: 2-Chlorophenol-d4	*0%*	*18 - 105*		B2C1021	03/08/2022	*03/09/22 14:27*	S4
Surrogate: 2-Fluorobiphenyl	*0%*	*34 - 106*		B2C1021	03/08/2022	*03/09/22 14:27*	S4
Surrogate: 2-Fluorophenol	*0%*	*16 - 94*		B2C1021	03/08/2022	*03/09/22 14:27*	S4
Surrogate: 4-Terphenyl-d14	*58.0 %*	*31 - 130*		B2C1021	03/08/2022	*03/09/22 14:27*	
Surrogate: Nitrobenzene-d5	*0%*	*23 - 102*		B2C1021	03/08/2022	*03/09/22 14:27*	S4
Surrogate: Phenol-d6	*0%*	*14 - 104*		B2C1021	03/08/2022	*03/09/22 14:27*	S4

Certificate of Analysis

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Irvine , CA 92612		Reported :	03/10/2022

QUALITY CONTROL SECTION

Percent Moisture - Quality Control

Analyte	Result (% by Weight)	PQL (% by Weight)	MDL (% by Weight)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B2C1048 - No_Prep_WC1_S										
Duplicate (B2C1048-DUP1)			**Source: 2200315-01**			Prepared: 3/9/2022 Analyzed: 3/9/2022				
Percent Solids	92.0984	0.10	0.10		92.0784			0.0217	30	

Certificate of Analysis

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Irvine , CA 92612	Reported : 03/10/2022

Title 22 Metals by ICP-AES EPA 6010B - Quality Control

Analyte	Result (mg/kg dry)	PQL (mg/kg dry)	MDL (mg/kg dry)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B2C1032 - EPA 3050B_S										
Matrix Spike (B2C1032-MS1)			**Source: 2200315-01**			Prepared: 3/9/2022 Analyzed: 3/9/2022				
Antimony	43.1203	2.2	0.55	27.1508	28.3483	54.4	0 - 102			
Arsenic	44.8997	1.1	0.13	27.1508	16.7436	104	55 - 117			
Barium	834.666	1.1	0.13	27.1508	774.747	221	11 - 177			M2
Beryllium	24.9343	1.1	0.03	27.1616	1.68156	85.6	64 - 115			
Cadmium	47.5431	1.1	0.15	27.1508	21.1603	97.2	62 - 116			
Chromium	291.560	1.1	0.28	27.1508	231.277	222	42 - 145			M2
Cobalt	64.5957	1.1	0.07	27.1508	36.7846	102	60 - 126			
Copper	756.042	110	10	27.1508	864.182	-398	37 - 163			M2
Lead	654.567	54	9.9	27.1508	6153.94	-20300	26 - 161			M2
Molybdenum	113.606	1.1	0.13	27.1508	96.6977	62.3	31 - 122			
Nickel	234.108	1.1	0.20	27.1508	216.362	65.4	52 - 130			
Selenium	51.7716	1.1	0.44	27.1508	22.8291	107	25 - 129			
Silver	17.0705	1.1	0.13	13.5754	2.98573	104	48 - 133			
Thallium	20.6005	1.1	0.41	27.1508	ND	75.9	25 - 119			
Vanadium	102.450	1.1	0.07	27.1508	58.4328	162	51 - 141			M2
Zinc	2733.40	54	8.2	27.1508	2991.56	-951	8 - 170			M2
Matrix Spike Dup (B2C1032-MSD1)			**Source: 2200315-01**			Prepared: 3/9/2022 Analyzed: 3/9/2022				
Antimony	44.1894	2.2	0.55	27.1508	28.3483	58.3	0 - 102	2.45	20	
Arsenic	46.0838	1.1	0.13	27.1508	16.7436	108	55 - 117	2.60	20	
Barium	871.572	1.1	0.13	27.1508	774.747	357	11 - 177	4.33	20	M2
Beryllium	25.6632	1.1	0.03	27.1616	1.68156	88.3	64 - 115	2.88	20	
Cadmium	48.6939	1.1	0.15	27.1508	21.1603	101	62 - 116	2.39	20	
Chromium	300.856	1.1	0.28	27.1508	231.277	256	42 - 145	3.14	20	M2
Cobalt	65.6232	1.1	0.07	27.1508	36.7846	106	60 - 126	1.58	20	
Copper	881.011	110	10	27.1508	864.182	62.0	37 - 163	15.3	20	
Lead	782.707	54	9.9	27.1508	6153.94	-19800	26 - 161	17.8	20	M2
Molybdenum	118.547	1.1	0.13	27.1508	96.6977	80.5	31 - 122	4.26	20	
Nickel	242.045	1.1	0.20	27.1508	216.362	94.6	52 - 130	3.33	20	
Selenium	53.5755	1.1	0.44	27.1508	22.8291	113	25 - 129	3.42	20	
Silver	17.8990	1.1	0.13	13.5754	2.98573	110	48 - 133	4.74	20	
Thallium	22.3213	1.1	0.41	27.1508	ND	82.2	25 - 119	8.02	20	
Vanadium	105.276	1.1	0.07	27.1508	58.4328	173	51 - 141	2.72	20	M2
Zinc	3257.58	54	8.2	27.1508	2991.56	980	8 - 170	17.5	20	M2

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SA Terminal Island (SATI) / 6013
19200 Von Karman Ave., Suite 800		Report To :	Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612		Reported :	03/10/2022

Title 22 Metals by ICP-AES EPA 6010B - Quality Control

Analyte	Result (mg/kg wet)	PQL (mg/kg wet)	MDL (mg/kg wet)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B2C1032 - EPA 3050B_S										
Blank (B2C1032-BLK1)						Prepared: 3/9/2022 Analyzed: 3/9/2022				
Antimony	ND	2.0	0.51							
Arsenic	ND	1.0	0.12							
Barium	ND	1.0	0.12							
Beryllium	ND	1.0	0.03							
Cadmium	ND	1.0	0.14							
Chromium	ND	1.0	0.26							
Cobalt	ND	1.0	0.07							
Copper	ND	2.0	0.19							
Lead	ND	1.0	0.18							
Molybdenum	ND	1.0	0.12							
Nickel	ND	1.0	0.18							
Selenium	ND	1.0	0.40							
Silver	ND	1.0	0.12							
Thallium	ND	1.0	0.38							
Vanadium	ND	1.0	0.06							
Zinc	ND	1.0	0.15							
LCS (B2C1032-BS1)						Prepared: 3/9/2022 Analyzed: 3/9/2022				
Antimony	26.2213	2.0	0.51	25.0000		105	80 - 120			
Arsenic	27.1756	1.0	0.12	25.0000		109	80 - 120			
Barium	26.1127	1.0	0.12	25.0000		104	80 - 120			
Beryllium	28.0814	1.0	0.03	25.0100		112	80 - 120			
Cadmium	27.1955	1.0	0.14	25.0000		109	80 - 120			
Chromium	27.3470	1.0	0.26	25.0000		109	80 - 120			
Cobalt	28.9780	1.0	0.07	25.0000		116	80 - 120			
Copper	26.9327	2.0	0.19	25.0000		108	80 - 120			
Lead	26.9355	1.0	0.18	25.0000		108	80 - 120			
Molybdenum	27.8629	1.0	0.12	25.0000		111	80 - 120			
Nickel	27.0212	1.0	0.18	25.0000		108	80 - 120			
Selenium	28.1742	1.0	0.40	25.0000		113	80 - 120			
Silver	12.8825	1.0	0.12	12.5000		103	80 - 120			
Thallium	27.1773	1.0	0.38	25.0000		109	80 - 120			
Vanadium	27.2601	1.0	0.06	25.0000		109	80 - 120			
Zinc	26.9772	1.0	0.15	25.0000		108	80 - 120			

Certificate of Analysis

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19200 Von Karman Ave., Suite 800		Report To :	Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612		Reported :	03/10/2022

Hexavalent Chromium by EPA 7196A/3060A - Quality Control

Analyte	Result (mg/kg dry)	PQL (mg/kg dry)	MDL (mg/kg dry)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B2C1043 - EPA 3060A_S (WC)										
Matrix Spike (B2C1043-MS1)			**Source: 2200315-01**			Prepared: 3/9/2022 Analyzed: 3/9/2022				
Hexavalent Chromium	55.9306	1.1	0.42	54.3016	11.6205	81.6	75 - 125			
Matrix Spike (B2C1043-MS2)			**Source: 2200315-01**			Prepared: 3/9/2022 Analyzed: 3/9/2022				
Hexavalent Chromium	1715.93	54	21	2235.31	ND	76.8	75 - 125			
Matrix Spike Dup (B2C1043-MSD1)			**Source: 2200315-01**			Prepared: 3/9/2022 Analyzed: 3/9/2022				
Hexavalent Chromium	55.7134	1.1	0.42	54.3016	11.6205	81.2	75 - 125	0.389	20	

Certificate of Analysis

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Irvine , CA 92612		Reported :	03/10/2022

Hexavalent Chromium by EPA 7196A/3060A - Quality Control

Analyte	Result (mg/kg wet)	PQL (mg/kg wet)	MDL (mg/kg wet)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B2C1043 - EPA 3060A_S (WC)										
Blank (B2C1043-BLK1)						Prepared: 3/9/2022 Analyzed: 3/9/2022				
Hexavalent Chromium	ND	1.0	0.39							
LCS (B2C1043-BS1)						Prepared: 3/9/2022 Analyzed: 3/9/2022				
Hexavalent Chromium	51.4000	1.0	0.39	50.0000		103	80 - 120			

Certificate of Analysis

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Irvine , CA 92612		Reported :	03/10/2022

Mercury by AA (Cold Vapor) EPA 7471A - Quality Control

Analyte	Result (mg/kg dry)	PQL (mg/kg dry)	MDL (mg/kg dry)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B2C1030 - EPA 7471_S										
Matrix Spike (B2C1030-MS1)			**Source: 2200311-01**			Prepared: 3/9/2022 Analyzed: 3/10/2022				
Mercury	0.272069	0.10	0.01	0.426083	ND	63.9	70 - 130			M3
Matrix Spike Dup (B2C1030-MSD1)			**Source: 2200311-01**			Prepared: 3/9/2022 Analyzed: 3/10/2022				
Mercury	0.275949	0.10	0.01	0.426083	ND	64.8	70 - 130	1.42	20	M3

Certificate of Analysis

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Irvine , CA 92612		Reported :	03/10/2022

Mercury by AA (Cold Vapor) EPA 7471A - Quality Control

Analyte	Result (mg/kg wet)	PQL (mg/kg wet)	MDL (mg/kg wet)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B2C1030 - EPA 7471_S										
Blank (B2C1030-BLK1)						Prepared: 3/9/2022 Analyzed: 3/10/2022				
Mercury	ND	0.10	0.01							
LCS (B2C1030-BS1)						Prepared: 3/9/2022 Analyzed: 3/10/2022				
Mercury	0.413856	0.10	0.01	0.416667		99.3	80 - 120			

Certificate of Analysis

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Irvine , CA 92612		Reported :	03/10/2022

Mercury by AA (Cold Vapor) EPA 7471A - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B2C1030 - EPA 7471_S									
Post Spike (B2C1030-PS1)			**Source: 2200311-01**		Prepared: 3/9/2022 Analyzed: 3/10/2022				
Mercury	0.005075		5.00000E-3	0.000119	99.1	85 - 115			M3

Certificate of Analysis

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19200 Von Karman Ave., Suite 800		Report To :	Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612		Reported :	03/10/2022

Diesel and Oil Range Organics by EPA 8015B - Quality Control

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B2C1020 - GCSEMI_DRO_S										
Blank (B2C1020-BLK1)						Prepared: 3/8/2022 Analyzed: 3/8/2022				
DRO	ND	10	3.6							
ORO	ND	10	3.6							
Surrogate: p-Terphenyl	*93.20*			*80.0000*		*117*	*62 - 141*			
LCS (B2C1020-BS1)						Prepared: 3/8/2022 Analyzed: 3/8/2022				
DRO	985.537	10	3.6	1000.00		98.6	56 - 139			
Surrogate: p-Terphenyl	*95.67*			*80.0000*		*120*	*62 - 141*			
Matrix Spike (B2C1020-MS1)			**Source: 2200310-01**			Prepared: 3/8/2022 Analyzed: 3/8/2022				
DRO	978.148	10	3.6	1000.00	15.8340	96.2	38 - 161			
Surrogate: p-Terphenyl	*100.3*			*80.0000*		*125*	*62 - 141*			
Matrix Spike Dup (B2C1020-MSD1)			**Source: 2200310-01**			Prepared: 3/8/2022 Analyzed: 3/8/2022				
DRO	978.425	10	3.6	1000.00	15.8340	96.3	38 - 161	0.0283	20	
Surrogate: p-Terphenyl	*97.99*			*80.0000*		*122*	*62 - 141*			

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SA Terminal Island (SATI) / 6013
19200 Von Karman Ave., Suite 800		Report To :	Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612		Reported :	03/10/2022

Polychlorinated Biphenyls by EPA 8082 - Quality Control

Analyte	Result (ug/kg wet)	PQL (ug/kg wet)	MDL (ug/kg wet)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B2C1010 - GCSEMI_PCB/PEST_S										
Blank (B2C1010-BLK1)						Prepared: 3/8/2022 Analyzed: 3/8/2022				
Aroclor 1016	ND	16	1.9							
Aroclor 1221	ND	16	1.9							
Aroclor 1232	ND	16	1.9							
Aroclor 1242	ND	16	1.9							
Aroclor 1248	ND	16	1.9							
Aroclor 1254	ND	16	1.9							
Aroclor 1260	ND	16	1.9							
Surrogate: Decachlorobiphenyl	*9.606*			*16.6667*		*57.6*	*0 - 87*			
Surrogate: Tetrachloro-m-xylene	*10.71*			*16.6667*		*64.2*	*0 - 103*			
Blank (B2C1010-BLK2)						Prepared: 3/8/2022 Analyzed: 3/9/2022				
Aroclor 1016	ND	16	1.9							
Aroclor 1221	ND	16	1.9							
Aroclor 1232	ND	16	1.9							
Aroclor 1242	ND	16	1.9							
Aroclor 1248	ND	16	1.9							
Aroclor 1254	ND	16	1.9							
Aroclor 1260	ND	16	1.9							
Surrogate: Decachlorobiphenyl	*8.972*			*16.6667*		*53.8*	*0 - 87*			
Surrogate: Tetrachloro-m-xylene	*7.916*			*16.6667*		*47.5*	*0 - 103*			
LCS (B2C1010-BS1)						Prepared: 3/8/2022 Analyzed: 3/8/2022				
Aroclor 1016	112.976	16	1.9	166.667		67.8	11 - 108			
Aroclor 1260	113.380	16	1.9	166.667		68.0	19 - 112			
Surrogate: Decachlorobiphenyl	*9.464*			*16.6667*		*56.8*	*0 - 87*			
Surrogate: Tetrachloro-m-xylene	*10.75*			*16.6667*		*64.5*	*0 - 103*			
LCS (B2C1010-BS2)						Prepared: 3/8/2022 Analyzed: 3/9/2022				
Aroclor 1016	74.0312	16	1.9	166.667		44.4	11 - 108			
Aroclor 1260	94.3393	16	1.9	166.667		56.6	19 - 112			
Surrogate: Decachlorobiphenyl	*8.987*			*16.6667*		*53.9*	*0 - 87*			
Surrogate: Tetrachloro-m-xylene	*7.703*			*16.6667*		*46.2*	*0 - 103*			
Matrix Spike (B2C1010-MS1)			**Source: 2200308-03**			Prepared: 3/8/2022 Analyzed: 3/8/2022				
Aroclor 1016	118.228	16	1.9	166.667	ND	70.9	0 - 135			
Aroclor 1260	124.500	16	1.9	166.667	9.42633	69.0	0 - 127			
Surrogate: Decachlorobiphenyl	*10.20*			*16.6667*		*61.2*	*0 - 87*			
Surrogate: Tetrachloro-m-xylene	*11.69*			*16.6667*		*70.2*	*0 - 103*			
Matrix Spike Dup (B2C1010-MSD1)			**Source: 2200308-03**			Prepared: 3/8/2022 Analyzed: 3/8/2022				
Aroclor 1016	122.692	16	1.9	166.667	ND	73.6	0 - 135	3.71	20	
Aroclor 1260	126.334	16	1.9	166.667	9.42633	70.1	0 - 127	1.46	20	
Surrogate: Decachlorobiphenyl	*10.15*			*16.6667*		*60.9*	*0 - 87*			
Surrogate: Tetrachloro-m-xylene	*11.32*			*16.6667*		*67.9*	*0 - 103*			

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SA Terminal Island (SATI) / 6013
19200 Von Karman Ave., Suite 800		Report To :	Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612		Reported :	03/10/2022

Polychlorinated Biphenyls by EPA 8082 - Quality Control (cont'd)

Analyte	Result (ug/kg wet)	PQL (ug/kg wet)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B2C1010 - GCSEMI_PCB/PEST_S (continued)									
Matrix Spike Dup (B2C1010-MSD1) - Continued			**Source: 2200308-03**			Prepared: 3/8/2022 Analyzed: 3/8/2022			

Certificate of Analysis

GSI Environmental, Inc.	Project Number : SA Terminal Island (SATI) / 6013
19200 Von Karman Ave., Suite 800	Report To : Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612	Reported : 03/10/2022

Semivolatile Organic Compounds by EPA 8270C - Quality Control

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	MDL (ug/kg dry)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B2C1021 - MSSEMI_NAL										
Matrix Spike (B2C1021-MS1)		**Source: 2200315-01**				Prepared: 3/8/2022 Analyzed: 3/9/2022				
1,2,4-Trichlorobenzene	ND	36000	5400	10860.3	ND	NR	35 - 113			M6
1,2-Dichlorobenzene	ND	36000	2800	10860.3	ND	NR	32 - 102			M6
1,3-Dichlorobenzene	ND	36000	3000	10860.3	ND	NR	32 - 100			M6
1,4-Dichlorobenzene	ND	36000	2900	10860.3	ND	NR	33 - 97			M6
2,4,5-Trichlorophenol	ND	36000	3200	10860.3	ND	NR	36 - 124			M6
2,4,6-Trichlorophenol	ND	36000	3800	10860.3	ND	NR	37 - 130			M6
2,4-Dichlorophenol	ND	180000	3700	10860.3	ND	NR	32 - 130			M6
2,4-Dimethylphenol	ND	36000	2800	10860.3	ND	NR	30 - 128			M6
2,4-Dinitrophenol	ND	180000	9300	10860.3	ND	NR	0 - 203			
2,4-Dinitrotoluene	ND	36000	3600	10860.3	ND	NR	21 - 168			M6
2,6-Dinitrotoluene	ND	36000	5300	10860.3	ND	NR	31 - 152			M6
2-Chloronaphthalene	ND	36000	3000	10860.3	ND	NR	33 - 130			M6
2-Chlorophenol	ND	36000	3300	10860.3	ND	NR	32 - 106			M6
2-Methylnaphthalene	ND	36000	2900	10860.3	ND	NR	33 - 125			M6
2-Methylphenol	ND	36000	3900	10860.3	ND	NR	34 - 96			M6
2-Nitroaniline	ND	180000	4600	10860.3	ND	NR	30 - 146			M6
2-Nitrophenol	ND	36000	4900	10860.3	ND	NR	22 - 125			M6
3,3´-Dichlorobenzidine	ND	72000	30000	10860.3	ND	NR	19 - 144			M6
3-Nitroaniline	ND	180000	5300	10860.3	ND	NR	36 - 133			M6
4,6-Dinitro-2-methyphenol	ND	180000	4500	10860.3	ND	NR	0 - 196			
4-Bromophenyl-phenylether	ND	36000	6900	10860.3	ND	NR	41 - 121			M6
4-Chloro-3-methylphenol	ND	72000	7700	10860.3	ND	NR	39 - 134			M6
4-Chloroaniline	ND	72000	5700	10860.3	ND	NR	37 - 115			M6
4-Chlorophenyl-phenylether	ND	36000	3600	10860.3	ND	NR	34 - 133			M6
4-Methylphenol	ND	36000	6200	5430.16	ND	NR	34 - 121			M6
4-Nitroaniline	ND	180000	4100	10860.3	ND	NR	30 - 138			M6
4-Nitrophenol	ND	36000	6900	10860.3	ND	NR	5 - 154			M6
Acenaphthene	ND	36000	4600	10860.3	ND	NR	33 - 121			M6
Acenaphthylene	ND	36000	6700	10860.3	ND	NR	35 - 120			M6
Anthracene	ND	36000	5600	10860.3	ND	NR	28 - 133			M6
Benzidine (M)	ND	180000	150000	10860.3	ND	NR	8 - 175			M6
Benzo(a)anthracene	ND	36000	4700	10860.3	ND	NR	32 - 127			M6
Benzo(a)pyrene	ND	36000	6900	10860.3	ND	NR	35 - 127			M6
Benzo(b)fluoranthene	ND	36000	7000	10860.3	ND	NR	29 - 126			M6
Benzo(g,h,i)perylene	ND	36000	8800	10860.3	ND	NR	26 - 129			M6
Benzo(k)fluoranthene	ND	36000	3600	10860.3	ND	NR	36 - 120			M6
Benzoic acid	ND	180000	97000	10860.3	ND	NR	0 - 208			
Benzyl alcohol	ND	72000	3500	10860.3	ND	NR	32 - 120			M6
bis(2-chloroethoxy)methane	ND	36000	7000	10860.3	ND	NR	34 - 108			M6
bis(2-Chloroethyl)ether	ND	36000	7200	10860.3	ND	NR	34 - 100			M6
bis(2-chloroisopropyl)ether	ND	36000	8300	10860.3	ND	NR	21 - 111			M6
bis(2-ethylhexyl)phthalate	114033	36000	6800	10860.3	ND	1050	39 - 131			M6
Butylbenzylphthalate	101761	36000	4500	10860.3	ND	937	39 - 129			M6
Chrysene	ND	36000	9100	10860.3	ND	NR	33 - 126			M6
Di-n-butylphthalate	ND	36000	5500	10860.3	ND	NR	42 - 122			M6

Certificate of Analysis

GSI Environmental, Inc.	Project Number : SA Terminal Island (SATI) / 6013
19200 Von Karman Ave., Suite 800	Report To : Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612	Reported : 03/10/2022

Semivolatile Organic Compounds by EPA 8270C - Quality Control (cont'd)

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	MDL (ug/kg dry)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B2C1021 - MSSEMI_NAL (continued)										
Matrix Spike (B2C1021-MS1) - Continued		**Source: 2200315-01**			Prepared: 3/8/2022 Analyzed: 3/9/2022					
Di-n-octylphthalate	116857	36000	6800	10860.3	ND	1080	30 - 147			M6
Dibenz(a,h)anthracene	ND	36000	4900	10860.3	ND	NR	30 - 126			M6
Dibenzofuran	ND	36000	6300	10860.3	ND	NR	36 - 133			M6
Diethyl phthalate	ND	36000	6400	10860.3	ND	NR	28 - 139			M6
Dimethyl phthalate	ND	36000	4400	10860.3	ND	NR	32 - 129			M6
Fluoranthene	ND	36000	6500	10860.3	ND	NR	23 - 140			M6
Fluorene	ND	36000	12000	10860.3	ND	NR	32 - 130			M6
Hexachlorobenzene	ND	36000	6000	10860.3	ND	NR	27 - 148			M6
Hexachlorobutadiene	ND	72000	5700	10860.3	ND	NR	29 - 112			M6
Hexachlorocyclopentadiene	ND	72000	7600	10860.3	ND	NR	13 - 147			M6
Hexachloroethane	ND	36000	10000	10860.3	ND	NR	31 - 104			M6
Indeno(1,2,3-cd)pyrene	ND	36000	8200	10860.3	ND	NR	21 - 137			M6
Isophorone	ND	36000	9200	10860.3	ND	NR	34 - 112			M6
N-Nitroso-di-n propylamine	ND	36000	6500	10860.3	ND	NR	36 - 115			M6
N-Nitrosodiphenylamine	ND	36000	3400	10860.3	ND	NR	40 - 120			M6
Naphthalene	ND	36000	6000	10860.3	ND	NR	33 - 108			M6
Nitrobenzene	ND	36000	6200	10860.3	ND	NR	32 - 122			M6
Pentachlorophenol	ND	180000	5400	10860.3	ND	NR	0 - 151			
Phenanthrene	ND	36000	7200	10860.3	ND	NR	40 - 122			M6
Phenol	ND	36000	3700	10860.3	ND	NR	35 - 112			M6
Pyrene	ND	36000	7900	10860.3	ND	NR	28 - 132			M6
Pyridine	ND	180000	29000	10860.3	ND	NR	5 - 107			M6
Surrogate: 1,2-Dichlorobenzene-d4	*0.000*			*10860.3*		*NR*	*23 - 102*			S4
Surrogate: 2,4,6-Tribromophenol	*0.000*			*16290.5*		*NR*	*3 - 138*			S4
Surrogate: 2-Chlorophenol-d4	*0.000*			*16290.5*		*NR*	*18 - 105*			S4
Surrogate: 2-Fluorobiphenyl	*3149*			*10860.3*		*29.0*	*34 - 106*			S4
Surrogate: 2-Fluorophenol	*0.000*			*16290.5*		*NR*	*16 - 94*			S4
Surrogate: 4-Terphenyl-d14	*7276*			*10860.3*		*67.0*	*31 - 130*			
Surrogate: Nitrobenzene-d5	*0.000*			*10860.3*		*NR*	*23 - 102*			S4
Surrogate: Phenol-d6	*0.000*			*16290.5*		*NR*	*14 - 104*			S4
Matrix Spike Dup (B2C1021-MSD1)		**Source: 2200315-01**			Prepared: 3/8/2022 Analyzed: 3/9/2022					
1,2,4-Trichlorobenzene	ND	36000	5400	10860.3	ND	NR	35 - 113	NR	20	M6
1,2-Dichlorobenzene	ND	36000	2800	10860.3	ND	NR	32 - 102	NR	20	M6
1,3-Dichlorobenzene	ND	36000	3000	10860.3	ND	NR	32 - 100	NR	20	M6
1,4-Dichlorobenzene	ND	36000	2900	10860.3	ND	NR	33 - 97	NR	20	M6
2,4,5-Trichlorophenol	ND	36000	3200	10860.3	ND	NR	36 - 124	NR	20	M6
2,4,6-Trichlorophenol	ND	36000	3800	10860.3	ND	NR	37 - 130	NR	20	M6
2,4-Dichlorophenol	ND	180000	3700	10860.3	ND	NR	32 - 130	NR	20	M6
2,4-Dimethylphenol	ND	36000	2800	10860.3	ND	NR	30 - 128	NR	20	M6
2,4-Dinitrophenol	ND	180000	9300	10860.3	ND	NR	0 - 203	NR	20	
2,4-Dinitrotoluene	ND	36000	3600	10860.3	ND	NR	21 - 168	NR	20	M6
2,6-Dinitrotoluene	ND	36000	5300	10860.3	ND	NR	31 - 152	NR	20	M6
2-Chloronaphthalene	ND	36000	3000	10860.3	ND	NR	33 - 130	NR	20	M6
2-Chlorophenol	ND	36000	3300	10860.3	ND	NR	32 - 106	NR	20	M6

Certificate of Analysis

GSI Environmental, Inc.	Project Number : SA Terminal Island (SATI) / 6013
19200 Von Karman Ave., Suite 800	Report To : Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612	Reported : 03/10/2022

Semivolatile Organic Compounds by EPA 8270C - Quality Control (cont'd)

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	MDL (ug/kg dry)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B2C1021 - MSSEMI_NAL (continued)										
Matrix Spike Dup (B2C1021-MSD1) - Continued		**Source: 2200315-01**				Prepared: 3/8/2022 Analyzed: 3/9/2022				
2-Methylnaphthalene	ND	36000	2900	10860.3	ND	NR	33 - 125	NR	20	M6
2-Methylphenol	ND	36000	3900	10860.3	ND	NR	34 - 96	NR	20	M6
2-Nitroaniline	ND	180000	4600	10860.3	ND	NR	30 - 146	NR	20	M6
2-Nitrophenol	ND	36000	4900	10860.3	ND	NR	22 - 125	NR	20	M6
3,3´-Dichlorobenzidine	ND	72000	30000	10860.3	ND	NR	19 - 144	NR	20	M6
3-Nitroaniline	ND	180000	5300	10860.3	ND	NR	36 - 133	NR	20	M6
4,6-Dinitro-2-methyphenol	ND	180000	4500	10860.3	ND	NR	0 - 196	NR	20	
4-Bromophenyl-phenylether	ND	36000	6900	10860.3	ND	NR	41 - 121	NR	20	M6
4-Chloro-3-methylphenol	ND	72000	7700	10860.3	ND	NR	39 - 134	NR	20	M6
4-Chloroaniline	ND	72000	5700	10860.3	ND	NR	37 - 115	NR	20	M6
4-Chlorophenyl-phenylether	ND	36000	3600	10860.3	ND	NR	34 - 133	NR	20	M6
4-Methylphenol	ND	36000	6200	5430.16	ND	NR	34 - 121	NR	20	M6
4-Nitroaniline	ND	180000	4100	10860.3	ND	NR	30 - 138	NR	20	M6
4-Nitrophenol	ND	36000	6900	10860.3	ND	NR	5 - 154	NR	20	M6
Acenaphthene	ND	36000	4600	10860.3	ND	NR	33 - 121	NR	20	M6
Acenaphthylene	ND	36000	6700	10860.3	ND	NR	35 - 120	NR	20	M6
Anthracene	ND	36000	5600	10860.3	ND	NR	28 - 133	NR	20	M6
Benzidine (M)	ND	180000	150000	10860.3	ND	NR	8 - 175	NR	20	M6
Benzo(a)anthracene	ND	36000	4700	10860.3	ND	NR	32 - 127	NR	20	M6
Benzo(a)pyrene	ND	36000	6900	10860.3	ND	NR	35 - 127	NR	20	M6
Benzo(b)fluoranthene	ND	36000	7000	10860.3	ND	NR	29 - 126	NR	20	M6
Benzo(g,h,i)perylene	ND	36000	8800	10860.3	ND	NR	26 - 129	NR	20	M6
Benzo(k)fluoranthene	ND	36000	3600	10860.3	ND	NR	36 - 120	NR	20	M6
Benzoic acid	ND	180000	97000	10860.3	ND	NR	0 - 208	NR	20	
Benzyl alcohol	ND	72000	3500	10860.3	ND	NR	32 - 120	NR	20	M6
bis(2-chloroethoxy)methane	ND	36000	7000	10860.3	ND	NR	34 - 108	NR	20	M6
bis(2-Chloroethyl)ether	ND	36000	7200	10860.3	ND	NR	34 - 100	NR	20	M6
bis(2-chloroisopropyl)ether	ND	36000	8300	10860.3	ND	NR	21 - 111	NR	20	M6
bis(2-ethylhexyl)phthalate	112078	36000	6800	10860.3	ND	1030	39 - 131	1.73	20	M6
Butylbenzylphthalate	101652	36000	4500	10860.3	ND	936	39 - 129	0.107	20	M6
Chrysene	ND	36000	9100	10860.3	ND	NR	33 - 126	NR	20	M6
Di-n-butylphthalate	ND	36000	5500	10860.3	ND	NR	42 - 122	NR	20	M6
Di-n-octylphthalate	115228	36000	6800	10860.3	ND	1060	30 - 147	1.40	20	M6
Dibenz(a,h)anthracene	ND	36000	4900	10860.3	ND	NR	30 - 126	NR	20	M6
Dibenzofuran	ND	36000	6300	10860.3	ND	NR	36 - 133	NR	20	M6
Diethyl phthalate	ND	36000	6400	10860.3	ND	NR	28 - 139	NR	20	M6
Dimethyl phthalate	ND	36000	4400	10860.3	ND	NR	32 - 129	NR	20	M6
Fluoranthene	ND	36000	6500	10860.3	ND	NR	23 - 140	NR	20	M6
Fluorene	ND	36000	12000	10860.3	ND	NR	32 - 130	NR	20	M6
Hexachlorobenzene	ND	36000	6000	10860.3	ND	NR	27 - 148	NR	20	M6
Hexachlorobutadiene	ND	72000	5700	10860.3	ND	NR	29 - 112	NR	20	M6
Hexachlorocyclopentadiene	ND	72000	7600	10860.3	ND	NR	13 - 147	NR	20	M6
Hexachloroethane	ND	36000	10000	10860.3	ND	NR	31 - 104	NR	20	M6
Indeno(1,2,3-cd)pyrene	ND	36000	8200	10860.3	ND	NR	21 - 137	NR	20	M6
Isophorone	ND	36000	9200	10860.3	ND	NR	34 - 112	NR	20	M6

Certificate of Analysis

GSI Environmental, Inc.	Project Number : SA Terminal Island (SATI) / 6013
19200 Von Karman Ave., Suite 800	Report To : Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612	Reported : 03/10/2022

Semivolatile Organic Compounds by EPA 8270C - Quality Control (cont'd)

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	MDL (ug/kg dry)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B2C1021 - MSSEMI_NAL (continued)										
Matrix Spike Dup (B2C1021-MSD1) - Continued		**Source: 2200315-01**				Prepared: 3/8/2022 Analyzed: 3/9/2022				
N-Nitroso-di-n propylamine	ND	36000	6500	10860.3	ND	NR	36 - 115	NR	20	M6
N-Nitrosodiphenylamine	ND	36000	3400	10860.3	ND	NR	40 - 120	NR	20	M6
Naphthalene	ND	36000	6000	10860.3	ND	NR	33 - 108	NR	20	M6
Nitrobenzene	ND	36000	6200	10860.3	ND	NR	32 - 122	NR	20	M6
Pentachlorophenol	ND	180000	5400	10860.3	ND	NR	0 - 151	NR	20	
Phenanthrene	ND	36000	7200	10860.3	ND	NR	40 - 122	NR	20	M6
Phenol	ND	36000	3700	10860.3	ND	NR	35 - 112	NR	20	M6
Pyrene	ND	36000	7900	10860.3	ND	NR	28 - 132	NR	20	M6
Pyridine	ND	180000	29000	10860.3	ND	NR	5 - 107	NR	20	M6
Surrogate: 1,2-Dichlorobenzene-d4	*0.000*			*10860.3*		*NR*	*23 - 102*			S4
Surrogate: 2,4,6-Tribromophenol	*0.000*			*16290.5*		*NR*	*3 - 138*			S4
Surrogate: 2-Chlorophenol-d4	*0.000*			*16290.5*		*NR*	*18 - 105*			S4
Surrogate: 2-Fluorobiphenyl	*977.4*			*10860.3*		*9.00*	*34 - 106*			S4
Surrogate: 2-Fluorophenol	*0.000*			*16290.5*		*NR*	*16 - 94*			S4
Surrogate: 4-Terphenyl-d14	*4561*			*10860.3*		*42.0*	*31 - 130*			
Surrogate: Nitrobenzene-d5	*0.000*			*10860.3*		*NR*	*23 - 102*			S4
Surrogate: Phenol-d6	*0.000*			*16290.5*		*NR*	*14 - 104*			S4

Certificate of Analysis

GSI Environmental, Inc.	Project Number : SA Terminal Island (SATI) / 6013
19200 Von Karman Ave., Suite 800	Report To : Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612	Reported : 03/10/2022

Semivolatile Organic Compounds by EPA 8270C - Quality Control

Analyte	Result (ug/kg wet)	PQL (ug/kg wet)	MDL (ug/kg wet)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B2C1021 - MSSEMI_NAL										
Blank (B2C1021-BLK1)							Prepared: 3/8/2022 Analyzed: 3/9/2022			
1,2,4-Trichlorobenzene	ND	330	50							
1,2-Dichlorobenzene	ND	330	26							
1,3-Dichlorobenzene	ND	330	27							
1,4-Dichlorobenzene	ND	330	27							
2,4,5-Trichlorophenol	ND	330	30							
2,4,6-Trichlorophenol	ND	330	35							
2,4-Dichlorophenol	ND	1600	34							
2,4-Dimethylphenol	ND	330	26							
2,4-Dinitrophenol	ND	1600	86							
2,4-Dinitrotoluene	ND	330	33							
2,6-Dinitrotoluene	ND	330	49							
2-Chloronaphthalene	ND	330	28							
2-Chlorophenol	ND	330	31							
2-Methylnaphthalene	ND	330	27							
2-Methylphenol	ND	330	36							
2-Nitroaniline	ND	1600	43							
2-Nitrophenol	ND	330	45							
3,3´-Dichlorobenzidine	ND	660	280							
3-Nitroaniline	ND	1600	49							
4,6-Dinitro-2-methyphenol	ND	1600	41							
4-Bromophenyl-phenylether	ND	330	64							
4-Chloro-3-methylphenol	ND	660	71							
4-Chloroaniline	ND	660	53							
4-Chlorophenyl-phenylether	ND	330	33							
4-Methylphenol	ND	330	57							
4-Nitroaniline	ND	1600	37							
4-Nitrophenol	ND	330	64							
Acenaphthene	ND	330	43							
Acenaphthylene	ND	330	62							
Anthracene	ND	330	51							
Benzidine (M)	ND	1600	1400							
Benzo(a)anthracene	ND	330	44							
Benzo(a)pyrene	ND	330	64							
Benzo(b)fluoranthene	ND	330	65							
Benzo(g,h,i)perylene	ND	330	81							
Benzo(k)fluoranthene	ND	330	33							
Benzoic acid	ND	1600	890							
Benzyl alcohol	ND	660	32							
bis(2-chloroethoxy)methane	ND	330	64							
bis(2-Chloroethyl)ether	ND	330	66							
bis(2-chloroisopropyl)ether	ND	330	76							
bis(2-ethylhexyl)phthalate	ND	330	63							
Butylbenzylphthalate	ND	330	41							
Chrysene	ND	330	84							
Di-n-butylphthalate	ND	330	51							

Certificate of Analysis

GSI Environmental, Inc.	Project Number : SA Terminal Island (SATI) / 6013
19200 Von Karman Ave., Suite 800	Report To : Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612	Reported : 03/10/2022

Semivolatile Organic Compounds by EPA 8270C - Quality Control (cont'd)

Analyte	Result (ug/kg wet)	PQL (ug/kg wet)	MDL (ug/kg wet)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B2C1021 - MSSEMI_NAL (continued)										
Blank (B2C1021-BLK1) - Continued						Prepared: 3/8/2022 Analyzed: 3/9/2022				
Di-n-octylphthalate	ND	330	63							
Dibenz(a,h)anthracene	ND	330	45							
Dibenzofuran	ND	330	58							
Diethyl phthalate	ND	330	58							
Dimethyl phthalate	ND	330	40							
Fluoranthene	ND	330	60							
Fluorene	ND	330	110							
Hexachlorobenzene	ND	330	55							
Hexachlorobutadiene	ND	660	53							
Hexachlorocyclopentadiene	ND	660	70							
Hexachloroethane	ND	330	94							
Indeno(1,2,3-cd)pyrene	ND	330	75							
Isophorone	ND	330	85							
N-Nitroso-di-n propylamine	ND	330	60							
N-Nitrosodiphenylamine	ND	330	32							
Naphthalene	ND	330	56							
Nitrobenzene	ND	330	57							
Pentachlorophenol	ND	1600	50							
Phenanthrene	ND	330	67							
Phenol	ND	330	34							
Pyrene	ND	330	72							
Pyridine	ND	1600	270							
Surrogate: 1,2-Dichlorobenzene-d4	*6789*			*10000.0*		*67.9*	*23 - 102*			
Surrogate: 2,4,6-Tribromophenol	*9591*			*15000.0*		*63.9*	*3 - 138*			
Surrogate: 2-Chlorophenol-d4	*10620*			*15000.0*		*70.8*	*18 - 105*			
Surrogate: 2-Fluorobiphenyl	*7625*			*10000.0*		*76.2*	*34 - 106*			
Surrogate: 2-Fluorophenol	*9631*			*15000.0*		*64.2*	*16 - 94*			
Surrogate: 4-Terphenyl-d14	*10350*			*10000.0*		*104*	*31 - 130*			
Surrogate: Nitrobenzene-d5	*5537*			*10000.0*		*55.4*	*23 - 102*			
Surrogate: Phenol-d6	*9795*			*15000.0*		*65.3*	*14 - 104*			
LCS (B2C1021-BS1)						Prepared: 3/8/2022 Analyzed: 3/9/2022				
1,2,4-Trichlorobenzene	7536.00	330	50	10000.0		75.4	41 - 104			
1,2-Dichlorobenzene	6618.00	330	26	10000.0		66.2	37 - 100			
1,3-Dichlorobenzene	6180.00	330	27	10000.0		61.8	36 - 98			
1,4-Dichlorobenzene	6532.00	330	27	10000.0		65.3	37 - 97			
2,4,5-Trichlorophenol	10356.0	330	30	10000.0		104	47 - 115			
2,4,6-Trichlorophenol	10393.0	330	35	10000.0		104	48 - 119			
2,4-Dichlorophenol	8085.00	1600	34	10000.0		80.8	46 - 118			
2,4-Dimethylphenol	8344.00	330	26	10000.0		83.4	41 - 114			
2,4-Dinitrophenol	6582.00	1600	86	10000.0		65.8	0 - 180			
2,4-Dinitrotoluene	9693.00	330	33	10000.0		96.9	40 - 138			
2,6-Dinitrotoluene	9601.00	330	49	10000.0		96.0	45 - 131			
2-Chloronaphthalene	8346.00	330	28	10000.0		83.5	46 - 112			
2-Chlorophenol	7099.00	330	31	10000.0		71.0	41 - 99			

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SA Terminal Island (SATI) / 6013
19200 Von Karman Ave., Suite 800		Report To :	Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612		Reported :	03/10/2022

Semivolatile Organic Compounds by EPA 8270C - Quality Control (cont'd)

Analyte	Result (ug/kg wet)	PQL (ug/kg wet)	MDL (ug/kg wet)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B2C1021 - MSSEMI_NAL (continued)										
LCS (B2C1021-BS1) - Continued						Prepared: 3/8/2022 Analyzed: 3/9/2022				
2-Methylnaphthalene	7938.00	330	27	10000.0		79.4	45 - 111			
2-Methylphenol	7637.00	330	36	10000.0		76.4	40 - 92			
2-Nitroaniline	8209.00	1600	43	10000.0		82.1	44 - 130			
2-Nitrophenol	7347.00	330	45	10000.0		73.5	34 - 114			
3,3´-Dichlorobenzidine	6666.00	660	280	10000.0		66.7	41 - 128			
3-Nitroaniline	9490.00	1600	49	10000.0		94.9	47 - 123			
4,6-Dinitro-2-methyphenol	8987.00	1600	41	10000.0		89.9	2 - 172			
4-Bromophenyl-phenylether	9135.00	330	64	10000.0		91.4	49 - 116			
4-Chloro-3-methylphenol	8975.00	660	71	10000.0		89.8	45 - 127			
4-Chloroaniline	8847.00	660	53	10000.0		88.5	50 - 106			
4-Chlorophenyl-phenylether	9836.00	330	33	10000.0		98.4	49 - 115			
4-Methylphenol	4202.00	330	57	5000.00		84.0	43 - 109			
4-Nitroaniline	10059.0	1600	37	10000.0		101	44 - 125			
4-Nitrophenol	7932.00	330	64	10000.0		79.3	30 - 146			
Acenaphthene	8769.00	330	43	10000.0		87.7	44 - 110			
Acenaphthylene	8730.00	330	62	10000.0		87.3	42 - 111			
Anthracene	9256.00	330	51	10000.0		92.6	41 - 117			
Benzidine (M)	2973.00	1600	1400	10000.0		29.7	0 - 189			
Benzo(a)anthracene	9727.00	330	44	10000.0		97.3	45 - 110			
Benzo(a)pyrene	9484.00	330	64	10000.0		94.8	45 - 116			
Benzo(b)fluoranthene	9650.00	330	65	10000.0		96.5	43 - 112			
Benzo(g,h,i)perylene	8950.00	330	81	10000.0		89.5	43 - 113			
Benzo(k)fluoranthene	9874.00	330	33	10000.0		98.7	42 - 114			
Benzoic acid	4647.00	1600	890	10000.0		46.5	0 - 134			
Benzyl alcohol	8065.00	660	32	10000.0		80.6	39 - 117			
bis(2-chloroethoxy)methane	7427.00	330	64	10000.0		74.3	43 - 102			
bis(2-Chloroethyl)ether	6293.00	330	66	10000.0		62.9	38 - 99			
bis(2-chloroisopropyl)ether	6115.00	330	76	10000.0		61.2	30 - 104			
bis(2-ethylhexyl)phthalate	8054.00	330	63	10000.0		80.5	49 - 123			
Butylbenzylphthalate	8326.00	330	41	10000.0		83.3	49 - 122			
Chrysene	9836.00	330	84	10000.0		98.4	46 - 111			
Di-n-butylphthalate	9359.00	330	51	10000.0		93.6	48 - 118			
Di-n-octylphthalate	9301.00	330	63	10000.0		93.0	46 - 131			
Dibenz(a,h)anthracene	9230.00	330	45	10000.0		92.3	43 - 113			
Dibenzofuran	8752.00	330	58	10000.0		87.5	50 - 113			
Diethyl phthalate	9169.00	330	58	10000.0		91.7	50 - 115			
Dimethyl phthalate	9223.00	330	40	10000.0		92.2	48 - 112			
Fluoranthene	9925.00	330	60	10000.0		99.2	40 - 119			
Fluorene	8876.00	330	110	10000.0		88.8	41 - 117			
Hexachlorobenzene	7649.00	330	55	10000.0		76.5	46 - 123			
Hexachlorobutadiene	8050.00	660	53	10000.0		80.5	37 - 104			
Hexachlorocyclopentadiene	8322.00	660	70	10000.0		83.2	30 - 128			
Hexachloroethane	6286.00	330	94	10000.0		62.9	38 - 103			
Indeno(1,2,3-cd)pyrene	9205.00	330	75	10000.0		92.0	43 - 113			
Isophorone	7851.00	330	85	10000.0		78.5	43 - 109			

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SA Terminal Island (SATI) / 6013
19200 Von Karman Ave., Suite 800		Report To :	Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612		Reported :	03/10/2022

Semivolatile Organic Compounds by EPA 8270C - Quality Control (cont'd)

Analyte	Result (ug/kg wet)	PQL (ug/kg wet)	MDL (ug/kg wet)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B2C1021 - MSSEMI_NAL (continued)										
LCS (B2C1021-BS1) - Continued						Prepared: 3/8/2022 Analyzed: 3/9/2022				
N-Nitroso-di-n propylamine	7683.00	330	60	10000.0		76.8	44 - 111			
N-Nitrosodiphenylamine	9473.00	330	32	10000.0		94.7	48 - 113			
Naphthalene	7245.00	330	56	10000.0		72.4	38 - 103			
Nitrobenzene	6196.00	330	57	10000.0		62.0	40 - 111			
Pentachlorophenol	8473.00	1600	50	10000.0		84.7	33 - 130			
Phenanthrene	9204.00	330	67	10000.0		92.0	42 - 119			
Phenol	7052.00	330	34	10000.0		70.5	43 - 104			
Pyrene	10157.0	330	72	10000.0		102	38 - 120			
Pyridine	2475.00	1600	270	10000.0		24.8	0 - 72			
Surrogate: 1,2-Dichlorobenzene-d4	*6680*			*10000.0*		*66.8*	*23 - 102*			
Surrogate: 2,4,6-Tribromophenol	*12040*			*15000.0*		*80.2*	*3 - 138*			
Surrogate: 2-Chlorophenol-d4	*10650*			*15000.0*		*71.0*	*18 - 105*			
Surrogate: 2-Fluorobiphenyl	*8336*			*10000.0*		*83.4*	*34 - 106*			
Surrogate: 2-Fluorophenol	*9040*			*15000.0*		*60.3*	*16 - 94*			
Surrogate: 4-Terphenyl-d14	*9248*			*10000.0*		*92.5*	*31 - 130*			
Surrogate: Nitrobenzene-d5	*6291*			*10000.0*		*62.9*	*23 - 102*			
Surrogate: Phenol-d6	*10470*			*15000.0*		*69.8*	*14 - 104*			

GSI ENVIRONMENTAL

CHAIN-OF-CUSTODY RECORD
Date: 3/8/22
Page 1 of 1

2200315

2.8°C

FROM: GSI Environmental Inc., 19200 Von Karman Ave, Suite 800, Irvine, CA 92612, (949) 679-1070	PROJECT NAME: SA Terminal Island (SATI)
	PROJECT CONTACT: Bianca Mintz
	GLOBAL ID:
	PROJECT NO.: 6013
	LAB CONTACT: Christine Caballero
	SAMPLER(S): (PRINT) JHN (Terry Ngo)
TEL: (949) 679-1070	E-MAIL: bgmintz@gsi-net.com
LABORATORY: ATL	ttwood@gsi-net.com

TURNAROUND TIME: ☐ SAME DAY ☑ 24 HR ☐ 48 HR ☐ 72 HR ☐ 5 DAYS ☐ STANDARD

SPECIAL INSTRUCTIONS: Run: metals, Cr6, PCBs, PAHs, TPH

Hold: Dioxins, phthalates, PBDE, & particle size until notice further

REQUESTED ANALYSES

Please check box or fill in blank as needed.

LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	Unpreserved	Preserved	Field Filtered	Metals	Cr6	PCBs	PAHs	TPH	Dioxins	phthalates	PBDE	particle size
1	Sample 15	3/8/22	0720	Soil	6	X			X	X	X	X	X	X	X	X	X
2	Sample 16	3/8/22	0745	Soil	6	X			X	X	X	X	X	X	X	X	X
3	Sample 17	3/8/22	0800	Soil	6	X			X	X	X	X	X	X	X	X	X
4	Sample 18	3/8/22	0820	Soil	6	X			X	X	X	X	X	X	X	X	X

Relinquished by: (Signature) [signature] 3/8/22 1426	Received by: (Signature) ATL [signature] Ethan Tran	Date: 3/8/22	Time: 14:26
Relinquished by: (Signature) ATL [signature] Ethan Tran 3/8/22 14:50	Received by: (Signature) [signature]	Date: 3/8/22	Time: 14:50
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:

ADVANCED TECHNOLOGY LABORATORIES

April 14, 2022

Timothy Wood/ Vinnie Robino/Josh Voss
GSI Environmental, Inc.
19200 Von Karman Ave., Suite 800
Irvine, CA 92612
Tel: (949) 679-1070
Fax:

ELAP No.: 1838
CSDLAC No.: 10196
ORELAP No.: CA300003

Re: ATL Work Order Number : 2200372
Client Reference : SATI / 6013

Enclosed are the results for sample(s) received on March 14, 2022 by Advanced Technology Laboratories. The sample(s) are tested for the parameters as indicated on the enclosed chain of custody in accordance with applicable laboratory certifications. The laboratory results contained in this report specifically pertains to the sample(s) submitted.

Thank you for the opportunity to serve the needs of your company. If you have any questions, please feel free to contact me or Project.Management@atlglobal.com.

Sincerely,

Victoria Michel

for

Victoria Michel, Project Assistant
Victoria.Michel@atlglobal.com
Authorized to Release on 04/14/22 11:56 on Behalf of

for

Amy Leung
Laboratory Director

The test results in this report relate exclusively to the samples as received by the laboratory, and meet the requirements of the methodology under which they were reported; any exceptions are noted within the report and/ or case narrative.

The cover letter/ signature page and the case narrative are integral parts of this analytical report; the absence of any portion of the report renders the report invalid. This report shall not be reproduced except in full, and shall have the express written approval of the laboratory, and the original client firm to do so
.
The electronic signature on this report is signed by an authorized signatory of Advanced Technology Laboratories, and is intended to be legally binding as the equivalent of a handwritten signature.

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612		Reported :	04/14/2022

SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Sample 19	2200372-01	Soil	3/14/22 12:00	3/14/22 18:51
Sample 20	2200372-02	Soil	3/14/22 12:02	3/14/22 18:51
Sample 21	2200372-03	Soil	3/14/22 12:02	3/14/22 18:51
Sample 22	2200372-04	Soil	3/14/22 12:10	3/14/22 18:51

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612		Reported :	04/14/2022

Notes and Definitions

S4	Surrogate was diluted out.
S10	Surrogate recovery was outside of laboratory acceptance limit due to possible matrix interference.
R	RPD value outside acceptance criteria. Calculation is based on raw values.
M2	Matrix spike recovery outside of acceptance limit due to possible matrix interference. The analytical batch was validated by the laboratory control sample.
D10	Sample required dilution due to dark sample
B6	Associated method blank above PQL, analyte non-detected. Therefore, reanalysis is not necessary.
B	Analyte detected in the associated method blank above the PQL.
ND	Analyte is not detected at or above the Practical Quantitation Limit (PQL). When client requests quantitation against MDL, analyte is not detected at or above the Method Detection Limit (MDL)
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
NR	Not Reported
RPD	Relative Percent Difference
CA2	CA-ELAP (CDPH)
OR1	OR-NELAP (OSPHL)

Notes:
(1) The reported MDL and PQL are based on prep ratio variation and analytical dilution.
(2) The suffix [2C] of specific analytes signifies that the reported result is taken from the instrument's second column.
(3) Results are wet unless otherwise specified.

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612		Reported :	04/14/2022

Percent Moisture

Analyte: Percent Solids **Analyst: VJ**

Laboratory ID	Client Sample ID	Result	Units	PQL	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
2200372-01	Sample 19	**99**	% by Weight	0.10	1	B2C1255	03/18/2022	03/21/22 12:00	
2200372-02	Sample 20	**99**	% by Weight	0.10	1	B2C1255	03/18/2022	03/21/22 12:00	
2200372-03	Sample 21	**99**	% by Weight	0.10	1	B2C1255	03/18/2022	03/21/22 12:00	
2200372-04	Sample 22	**94**	% by Weight	0.10	1	B2C1255	03/18/2022	03/21/22 12:00	

Hexavalent Chromium by EPA 7196A/3060A

Analyte: Hexavalent Chromium **Analyst: VJ**

Laboratory ID	Client Sample ID	Result	Units	PQL	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
2200372-01	Sample 19	**14**	mg/kg dry	1.0	1	B2C1256	03/18/2022	03/18/22 18:05	
2200372-02	Sample 20	**10**	mg/kg dry	1.0	1	B2C1256	03/18/2022	03/18/22 18:05	
2200372-03	Sample 21	**ND**	mg/kg dry	1.0	1	B2C1256	03/18/2022	03/18/22 18:05	
2200372-04	Sample 22	**ND**	mg/kg dry	1.1	1	B2C1256	03/18/2022	03/18/22 18:05	

Mercury by AA (Cold Vapor) EPA 7471A

Analyte: Mercury **Analyst: AEG**

Laboratory ID	Client Sample ID	Result	Units	PQL	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
2200372-01	Sample 19	**0.20**	mg/kg dry	0.10	1	B2C1219	03/17/2022	03/17/22 14:05	
2200372-02	Sample 20	**0.24**	mg/kg dry	0.10	1	B2C1219	03/17/2022	03/17/22 14:08	
2200372-03	Sample 21	**0.21**	mg/kg dry	0.10	1	B2C1219	03/17/2022	03/17/22 14:11	
2200372-04	Sample 22	**ND**	mg/kg dry	0.11	1	B2C1219	03/17/2022	03/17/22 14:14	

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612		Reported :	04/14/2022

Client Sample ID: Sample 19
Lab ID: 2200372-01

Title 22 Metals by ICP-AES EPA 6010B

Analyst: WT

Analyte	Result (mg/kg dry)	PQL (mg/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	**8.4**	2.0	1	B2C1236	03/18/2022	03/18/22 16:34	
Arsenic	**3.1**	1.0	1	B2C1236	03/18/2022	03/18/22 16:34	
Barium	**220**	1.0	1	B2C1236	03/18/2022	03/18/22 16:34	
Beryllium	ND	1.0	1	B2C1236	03/18/2022	03/18/22 16:34	
Cadmium	**4.8**	1.0	1	B2C1236	03/18/2022	03/18/22 16:34	
Chromium	**100**	1.0	1	B2C1236	03/18/2022	03/18/22 16:34	
Cobalt	**8.6**	1.0	1	B2C1236	03/18/2022	03/18/22 16:34	
Copper	**140**	2.0	1	B2C1236	03/18/2022	03/18/22 16:34	
Lead	**180**	1.0	1	B2C1236	03/18/2022	03/18/22 16:34	
Molybdenum	**8.8**	1.0	1	B2C1236	03/18/2022	03/18/22 16:34	
Nickel	**41**	1.0	1	B2C1236	03/18/2022	03/18/22 16:34	
Selenium	**8.7**	1.0	1	B2C1236	03/18/2022	03/18/22 16:34	
Silver	ND	1.0	1	B2C1236	03/18/2022	03/18/22 16:34	
Thallium	ND	1.0	1	B2C1236	03/18/2022	03/18/22 16:34	
Vanadium	**30**	1.0	1	B2C1236	03/18/2022	03/18/22 16:34	
Zinc	**2600**	10	10	B2C1236	03/18/2022	03/18/22 18:00	

Diesel and Oil Range Organics by EPA 8015B

Analyst: JV

Analyte	Result (mg/kg dry)	PQL (mg/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	**600**	200	20	B2C1215	03/16/2022	03/17/22 19:33	D10
ORO	**680**	200	20	B2C1215	03/16/2022	03/17/22 19:33	D10
Surrogate: p-Terphenyl	*124 %*	*62 - 141*		B2C1215	03/16/2022	*03/17/22 19:33*	

Polychlorinated Biphenyls by EPA 8082

Analyst: KL

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aroclor 1016	ND	16	1	B2C1216	03/16/2022	03/17/22 17:32	
Aroclor 1221	ND	16	1	B2C1216	03/16/2022	03/17/22 17:32	
Aroclor 1232	ND	16	1	B2C1216	03/16/2022	03/17/22 17:32	
Aroclor 1242	ND	16	1	B2C1216	03/16/2022	03/17/22 17:32	
Aroclor 1248	ND	16	1	B2C1216	03/16/2022	03/17/22 17:32	
Aroclor 1254	ND	16	1	B2C1216	03/16/2022	03/17/22 17:32	
Aroclor 1260	ND	16	1	B2C1216	03/16/2022	03/17/22 17:32	
Surrogate: Decachlorobiphenyl	*0%*	*0 - 87*		B2C1216	03/16/2022	*03/17/22 17:32*	

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612		Reported :	04/14/2022

Client Sample ID: Sample 19
Lab ID: 2200372-01

Polychlorinated Biphenyls by EPA 8082

Analyst: KL

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Surrogate: Tetrachloro-m-xylene	*0%*	*0 - 103*		B2C1216	03/16/2022	*03/17/22 17:32*	

Semivolatile Organic Compounds by EPA 8270C

Analyst: EB

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,2,4-Trichlorobenzene	ND	22000	100	B2C1217	03/16/2022	03/22/22 21:01	D10
1,2-Dichlorobenzene	ND	22000	100	B2C1217	03/16/2022	03/22/22 21:01	D10
1,3-Dichlorobenzene	ND	22000	100	B2C1217	03/16/2022	03/22/22 21:01	D10
1,4-Dichlorobenzene	ND	22000	100	B2C1217	03/16/2022	03/22/22 21:01	D10
2,4,5-Trichlorophenol	ND	22000	100	B2C1217	03/16/2022	03/22/22 21:01	D10
2,4,6-Trichlorophenol	ND	22000	100	B2C1217	03/16/2022	03/22/22 21:01	D10
2,4-Dichlorophenol	ND	110000	100	B2C1217	03/16/2022	03/22/22 21:01	D10
2,4-Dimethylphenol	ND	22000	100	B2C1217	03/16/2022	03/22/22 21:01	D10
2,4-Dinitrophenol	ND	110000	100	B2C1217	03/16/2022	03/22/22 21:01	D10
2,4-Dinitrotoluene	ND	22000	100	B2C1217	03/16/2022	03/22/22 21:01	D10
2,6-Dinitrotoluene	ND	22000	100	B2C1217	03/16/2022	03/22/22 21:01	D10
2-Chloronaphthalene	ND	22000	100	B2C1217	03/16/2022	03/22/22 21:01	D10
2-Chlorophenol	ND	22000	100	B2C1217	03/16/2022	03/22/22 21:01	D10
2-Methylnaphthalene	ND	22000	100	B2C1217	03/16/2022	03/22/22 21:01	D10
2-Methylphenol	ND	22000	100	B2C1217	03/16/2022	03/22/22 21:01	D10
2-Nitroaniline	ND	110000	100	B2C1217	03/16/2022	03/22/22 21:01	D10
2-Nitrophenol	ND	22000	100	B2C1217	03/16/2022	03/22/22 21:01	D10
3,3´-Dichlorobenzidine	ND	44000	100	B2C1217	03/16/2022	03/22/22 21:01	D10
3-Nitroaniline	ND	110000	100	B2C1217	03/16/2022	03/22/22 21:01	D10
4,6-Dinitro-2-methyphenol	ND	110000	100	B2C1217	03/16/2022	03/22/22 21:01	D10
4-Bromophenyl-phenylether	ND	22000	100	B2C1217	03/16/2022	03/22/22 21:01	D10
4-Chloro-3-methylphenol	ND	44000	100	B2C1217	03/16/2022	03/22/22 21:01	D10
4-Chloroaniline	ND	44000	100	B2C1217	03/16/2022	03/22/22 21:01	D10
4-Chlorophenyl-phenylether	ND	22000	100	B2C1217	03/16/2022	03/22/22 21:01	D10
4-Methylphenol	ND	22000	100	B2C1217	03/16/2022	03/22/22 21:01	D10
4-Nitroaniline	ND	110000	100	B2C1217	03/16/2022	03/22/22 21:01	D10
4-Nitrophenol	ND	22000	100	B2C1217	03/16/2022	03/22/22 21:01	D10
Acenaphthene	ND	22000	100	B2C1217	03/16/2022	03/22/22 21:01	D10
Acenaphthylene	ND	22000	100	B2C1217	03/16/2022	03/22/22 21:01	D10
Anthracene	ND	22000	100	B2C1217	03/16/2022	03/22/22 21:01	D10
Benzidine (M)	ND	110000	100	B2C1217	03/16/2022	03/22/22 21:01	D10
Benzo(a)anthracene	ND	22000	100	B2C1217	03/16/2022	03/22/22 21:01	D10

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612		Reported :	04/14/2022

Client Sample ID: Sample 19
Lab ID: 2200372-01

Semivolatile Organic Compounds by EPA 8270C **Analyst: EB**

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Benzo(a)pyrene	ND	22000	100	B2C1217	03/16/2022	03/22/22 21:01	D10
Benzo(b)fluoranthene	ND	22000	100	B2C1217	03/16/2022	03/22/22 21:01	D10
Benzo(g,h,i)perylene	ND	22000	100	B2C1217	03/16/2022	03/22/22 21:01	D10
Benzo(k)fluoranthene	ND	22000	100	B2C1217	03/16/2022	03/22/22 21:01	D10
Benzoic acid	ND	110000	100	B2C1217	03/16/2022	03/22/22 21:01	D10
Benzyl alcohol	ND	44000	100	B2C1217	03/16/2022	03/22/22 21:01	D10
bis(2-chloroethoxy)methane	ND	22000	100	B2C1217	03/16/2022	03/22/22 21:01	D10
bis(2-Chloroethyl)ether	ND	22000	100	B2C1217	03/16/2022	03/22/22 21:01	D10
bis(2-chloroisopropyl)ether	ND	22000	100	B2C1217	03/16/2022	03/22/22 21:01	D10
bis(2-ethylhexyl)phthalate	ND	22000	100	B2C1217	03/16/2022	03/22/22 21:01	D10
Butylbenzylphthalate	ND	22000	100	B2C1217	03/16/2022	03/22/22 21:01	D10
Chrysene	ND	22000	100	B2C1217	03/16/2022	03/22/22 21:01	D10
Di-n-butylphthalate	ND	22000	100	B2C1217	03/16/2022	03/22/22 21:01	D10
Di-n-octylphthalate	ND	22000	100	B2C1217	03/16/2022	03/22/22 21:01	D10
Dibenz(a,h)anthracene	ND	22000	100	B2C1217	03/16/2022	03/22/22 21:01	D10
Dibenzofuran	ND	22000	100	B2C1217	03/16/2022	03/22/22 21:01	D10
Diethyl phthalate	ND	22000	100	B2C1217	03/16/2022	03/22/22 21:01	D10
Dimethyl phthalate	ND	22000	100	B2C1217	03/16/2022	03/22/22 21:01	D10
Fluoranthene	ND	22000	100	B2C1217	03/16/2022	03/22/22 21:01	D10
Fluorene	ND	22000	100	B2C1217	03/16/2022	03/22/22 21:01	D10
Hexachlorobenzene	ND	22000	100	B2C1217	03/16/2022	03/22/22 21:01	D10
Hexachlorobutadiene	ND	44000	100	B2C1217	03/16/2022	03/22/22 21:01	D10
Hexachlorocyclopentadiene	ND	44000	100	B2C1217	03/16/2022	03/22/22 21:01	D10
Hexachloroethane	ND	22000	100	B2C1217	03/16/2022	03/22/22 21:01	D10
Indeno(1,2,3-cd)pyrene	ND	22000	100	B2C1217	03/16/2022	03/22/22 21:01	D10
Isophorone	ND	22000	100	B2C1217	03/16/2022	03/22/22 21:01	D10
N-Nitroso-di-n propylamine	ND	22000	100	B2C1217	03/16/2022	03/22/22 21:01	D10
N-Nitrosodiphenylamine	ND	22000	100	B2C1217	03/16/2022	03/22/22 21:01	D10
Naphthalene	ND	22000	100	B2C1217	03/16/2022	03/22/22 21:01	D10
Nitrobenzene	ND	22000	100	B2C1217	03/16/2022	03/22/22 21:01	D10
Pentachlorophenol	ND	110000	100	B2C1217	03/16/2022	03/22/22 21:01	D10
Phenanthrene	ND	22000	100	B2C1217	03/16/2022	03/22/22 21:01	D10
Phenol	ND	22000	100	B2C1217	03/16/2022	03/22/22 21:01	D10
Pyrene	ND	22000	100	B2C1217	03/16/2022	03/22/22 21:01	D10
Pyridine	ND	110000	100	B2C1217	03/16/2022	03/22/22 21:01	D10
Surrogate: 1,2-Dichlorobenzene-d4	*0%*	*23 - 102*		B2C1217	03/16/2022	*03/22/22 21:01*	S4
Surrogate: 2,4,6-Tribromophenol	*0%*	*3 - 138*		B2C1217	03/16/2022	*03/22/22 21:01*	S4
Surrogate: 2-Chlorophenol-d4	*12.7 %*	*18 - 105*		B2C1217	03/16/2022	*03/22/22 21:01*	S4
Surrogate: 2-Fluorobiphenyl	*58.0 %*	*34 - 106*		B2C1217	03/16/2022	*03/22/22 21:01*	

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612		Reported :	04/14/2022

Client Sample ID: Sample 19
Lab ID: 2200372-01

Semivolatile Organic Compounds by EPA 8270C **Analyst: EB**

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Surrogate: 2-Fluorophenol	*0%*	*16 - 94*		B2C1217	03/16/2022	*03/22/22 21:01*	S4
Surrogate: 4-Terphenyl-d14	*54.0 %*	*31 - 130*		B2C1217	03/16/2022	*03/22/22 21:01*	
Surrogate: Nitrobenzene-d5	*0%*	*23 - 102*		B2C1217	03/16/2022	*03/22/22 21:01*	S4
Surrogate: Phenol-d6	*0%*	*14 - 104*		B2C1217	03/16/2022	*03/22/22 21:01*	S4

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612		Reported :	04/14/2022

Client Sample ID: Sample 20
Lab ID: 2200372-02

Title 22 Metals by ICP-AES EPA 6010B

Analyst: WT

Analyte	Result (mg/kg dry)	PQL (mg/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	**7.1**	2.0	1	B2C1236	03/18/2022	03/18/22 16:39	
Arsenic	**5.0**	1.0	1	B2C1236	03/18/2022	03/18/22 16:39	
Barium	**380**	1.0	1	B2C1236	03/18/2022	03/18/22 16:39	
Beryllium	ND	1.0	1	B2C1236	03/18/2022	03/18/22 16:39	
Cadmium	**3.9**	1.0	1	B2C1236	03/18/2022	03/18/22 16:39	
Chromium	**94**	1.0	1	B2C1236	03/18/2022	03/18/22 16:39	
Cobalt	**8.8**	1.0	1	B2C1236	03/18/2022	03/18/22 16:39	
Copper	**130**	2.0	1	B2C1236	03/18/2022	03/18/22 16:39	
Lead	**210**	1.0	1	B2C1236	03/18/2022	03/18/22 16:39	
Molybdenum	**9.6**	1.0	1	B2C1236	03/18/2022	03/18/22 16:39	
Nickel	**37**	1.0	1	B2C1236	03/18/2022	03/18/22 16:39	
Selenium	**7.0**	1.0	1	B2C1236	03/18/2022	03/18/22 16:39	
Silver	ND	1.0	1	B2C1236	03/18/2022	03/18/22 16:39	
Thallium	ND	1.0	1	B2C1236	03/18/2022	03/18/22 16:39	
Vanadium	**38**	1.0	1	B2C1236	03/18/2022	03/18/22 16:39	
Zinc	**2400**	10	10	B2C1236	03/18/2022	03/18/22 18:05	

Diesel and Oil Range Organics by EPA 8015B

Analyst: JV

Analyte	Result (mg/kg dry)	PQL (mg/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	**730**	200	20	B2C1215	03/16/2022	03/17/22 19:54	D10
ORO	**1000**	200	20	B2C1215	03/16/2022	03/17/22 19:54	D10
Surrogate: p-Terphenyl	*145 %*	*62 - 141*		B2C1215	03/16/2022	*03/17/22 19:54*	S10

Polychlorinated Biphenyls by EPA 8082

Analyst: KL

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aroclor 1016	ND	16	1	B2C1216	03/16/2022	03/17/22 17:51	
Aroclor 1221	ND	16	1	B2C1216	03/16/2022	03/17/22 17:51	
Aroclor 1232	ND	16	1	B2C1216	03/16/2022	03/17/22 17:51	
Aroclor 1242	ND	16	1	B2C1216	03/16/2022	03/17/22 17:51	
Aroclor 1248	ND	16	1	B2C1216	03/16/2022	03/17/22 17:51	
Aroclor 1254	ND	16	1	B2C1216	03/16/2022	03/17/22 17:51	
Aroclor 1260	ND	16	1	B2C1216	03/16/2022	03/17/22 17:51	
Surrogate: Decachlorobiphenyl	*0%*	*0 - 87*		B2C1216	03/16/2022	*03/17/22 17:51*	

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612		Reported :	04/14/2022

Client Sample ID: Sample 20
Lab ID: 2200372-02

Polychlorinated Biphenyls by EPA 8082

Analyst: KL

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Surrogate: Tetrachloro-m-xylene	*0%*	*0 - 103*		B2C1216	03/16/2022	*03/17/22 17:51*	

Semivolatile Organic Compounds by EPA 8270C

Analyst: EB

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,2,4-Trichlorobenzene	ND	22000	100	B2C1217	03/16/2022	03/22/22 21:28	D10
1,2-Dichlorobenzene	ND	22000	100	B2C1217	03/16/2022	03/22/22 21:28	D10
1,3-Dichlorobenzene	ND	22000	100	B2C1217	03/16/2022	03/22/22 21:28	D10
1,4-Dichlorobenzene	ND	22000	100	B2C1217	03/16/2022	03/22/22 21:28	D10
2,4,5-Trichlorophenol	ND	22000	100	B2C1217	03/16/2022	03/22/22 21:28	D10
2,4,6-Trichlorophenol	ND	22000	100	B2C1217	03/16/2022	03/22/22 21:28	D10
2,4-Dichlorophenol	ND	110000	100	B2C1217	03/16/2022	03/22/22 21:28	D10
2,4-Dimethylphenol	ND	22000	100	B2C1217	03/16/2022	03/22/22 21:28	D10
2,4-Dinitrophenol	ND	110000	100	B2C1217	03/16/2022	03/22/22 21:28	D10
2,4-Dinitrotoluene	ND	22000	100	B2C1217	03/16/2022	03/22/22 21:28	D10
2,6-Dinitrotoluene	ND	22000	100	B2C1217	03/16/2022	03/22/22 21:28	D10
2-Chloronaphthalene	ND	22000	100	B2C1217	03/16/2022	03/22/22 21:28	D10
2-Chlorophenol	ND	22000	100	B2C1217	03/16/2022	03/22/22 21:28	D10
2-Methylnaphthalene	ND	22000	100	B2C1217	03/16/2022	03/22/22 21:28	D10
2-Methylphenol	ND	22000	100	B2C1217	03/16/2022	03/22/22 21:28	D10
2-Nitroaniline	ND	110000	100	B2C1217	03/16/2022	03/22/22 21:28	D10
2-Nitrophenol	ND	22000	100	B2C1217	03/16/2022	03/22/22 21:28	D10
3,3´-Dichlorobenzidine	ND	44000	100	B2C1217	03/16/2022	03/22/22 21:28	D10
3-Nitroaniline	ND	110000	100	B2C1217	03/16/2022	03/22/22 21:28	D10
4,6-Dinitro-2-methyphenol	ND	110000	100	B2C1217	03/16/2022	03/22/22 21:28	D10
4-Bromophenyl-phenylether	ND	22000	100	B2C1217	03/16/2022	03/22/22 21:28	D10
4-Chloro-3-methylphenol	ND	44000	100	B2C1217	03/16/2022	03/22/22 21:28	D10
4-Chloroaniline	ND	44000	100	B2C1217	03/16/2022	03/22/22 21:28	D10
4-Chlorophenyl-phenylether	ND	22000	100	B2C1217	03/16/2022	03/22/22 21:28	D10
4-Methylphenol	ND	22000	100	B2C1217	03/16/2022	03/22/22 21:28	D10
4-Nitroaniline	ND	110000	100	B2C1217	03/16/2022	03/22/22 21:28	D10
4-Nitrophenol	ND	22000	100	B2C1217	03/16/2022	03/22/22 21:28	D10
Acenaphthene	ND	22000	100	B2C1217	03/16/2022	03/22/22 21:28	D10
Acenaphthylene	ND	22000	100	B2C1217	03/16/2022	03/22/22 21:28	D10
Anthracene	ND	22000	100	B2C1217	03/16/2022	03/22/22 21:28	D10
Benzidine (M)	ND	110000	100	B2C1217	03/16/2022	03/22/22 21:28	D10
Benzo(a)anthracene	ND	22000	100	B2C1217	03/16/2022	03/22/22 21:28	D10

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612		Reported :	04/14/2022

Client Sample ID: Sample 20
Lab ID: 2200372-02

Semivolatile Organic Compounds by EPA 8270C **Analyst: EB**

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Benzo(a)pyrene	ND	22000	100	B2C1217	03/16/2022	03/22/22 21:28	D10
Benzo(b)fluoranthene	ND	22000	100	B2C1217	03/16/2022	03/22/22 21:28	D10
Benzo(g,h,i)perylene	ND	22000	100	B2C1217	03/16/2022	03/22/22 21:28	D10
Benzo(k)fluoranthene	ND	22000	100	B2C1217	03/16/2022	03/22/22 21:28	D10
Benzoic acid	ND	110000	100	B2C1217	03/16/2022	03/22/22 21:28	D10
Benzyl alcohol	ND	44000	100	B2C1217	03/16/2022	03/22/22 21:28	D10
bis(2-chloroethoxy)methane	ND	22000	100	B2C1217	03/16/2022	03/22/22 21:28	D10
bis(2-Chloroethyl)ether	ND	22000	100	B2C1217	03/16/2022	03/22/22 21:28	D10
bis(2-chloroisopropyl)ether	ND	22000	100	B2C1217	03/16/2022	03/22/22 21:28	D10
bis(2-ethylhexyl)phthalate	ND	22000	100	B2C1217	03/16/2022	03/22/22 21:28	D10
Butylbenzylphthalate	ND	22000	100	B2C1217	03/16/2022	03/22/22 21:28	D10
Chrysene	ND	22000	100	B2C1217	03/16/2022	03/22/22 21:28	D10
Di-n-butylphthalate	ND	22000	100	B2C1217	03/16/2022	03/22/22 21:28	D10
Di-n-octylphthalate	ND	22000	100	B2C1217	03/16/2022	03/22/22 21:28	D10
Dibenz(a,h)anthracene	ND	22000	100	B2C1217	03/16/2022	03/22/22 21:28	D10
Dibenzofuran	ND	22000	100	B2C1217	03/16/2022	03/22/22 21:28	D10
Diethyl phthalate	ND	22000	100	B2C1217	03/16/2022	03/22/22 21:28	D10
Dimethyl phthalate	ND	22000	100	B2C1217	03/16/2022	03/22/22 21:28	D10
Fluoranthene	ND	22000	100	B2C1217	03/16/2022	03/22/22 21:28	D10
Fluorene	ND	22000	100	B2C1217	03/16/2022	03/22/22 21:28	D10
Hexachlorobenzene	ND	22000	100	B2C1217	03/16/2022	03/22/22 21:28	D10
Hexachlorobutadiene	ND	44000	100	B2C1217	03/16/2022	03/22/22 21:28	D10
Hexachlorocyclopentadiene	ND	44000	100	B2C1217	03/16/2022	03/22/22 21:28	D10
Hexachloroethane	ND	22000	100	B2C1217	03/16/2022	03/22/22 21:28	D10
Indeno(1,2,3-cd)pyrene	ND	22000	100	B2C1217	03/16/2022	03/22/22 21:28	D10
Isophorone	ND	22000	100	B2C1217	03/16/2022	03/22/22 21:28	D10
N-Nitroso-di-n propylamine	ND	22000	100	B2C1217	03/16/2022	03/22/22 21:28	D10
N-Nitrosodiphenylamine	ND	22000	100	B2C1217	03/16/2022	03/22/22 21:28	D10
Naphthalene	ND	22000	100	B2C1217	03/16/2022	03/22/22 21:28	D10
Nitrobenzene	ND	22000	100	B2C1217	03/16/2022	03/22/22 21:28	D10
Pentachlorophenol	ND	110000	100	B2C1217	03/16/2022	03/22/22 21:28	D10
Phenanthrene	ND	22000	100	B2C1217	03/16/2022	03/22/22 21:28	D10
Phenol	ND	22000	100	B2C1217	03/16/2022	03/22/22 21:28	D10
Pyrene	ND	22000	100	B2C1217	03/16/2022	03/22/22 21:28	D10
Pyridine	ND	110000	100	B2C1217	03/16/2022	03/22/22 21:28	D10
Surrogate: 1,2-Dichlorobenzene-d4	*56.0 %*	*23 - 102*		B2C1217	03/16/2022	*03/22/22 21:28*	
Surrogate: 2,4,6-Tribromophenol	*0%*	*3 - 138*		B2C1217	03/16/2022	*03/22/22 21:28*	S4
Surrogate: 2-Chlorophenol-d4	*0%*	*18 - 105*		B2C1217	03/16/2022	*03/22/22 21:28*	S4
Surrogate: 2-Fluorobiphenyl	*55.0 %*	*34 - 106*		B2C1217	03/16/2022	*03/22/22 21:28*	

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612		Reported :	04/14/2022

Client Sample ID: Sample 20
Lab ID: 2200372-02

Semivolatile Organic Compounds by EPA 8270C **Analyst: EB**

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Surrogate: 2-Fluorophenol	*0%*	*16 - 94*		B2C1217	03/16/2022	*03/22/22 21:28*	S4
Surrogate: 4-Terphenyl-d14	*65.0 %*	*31 - 130*		B2C1217	03/16/2022	*03/22/22 21:28*	
Surrogate: Nitrobenzene-d5	*0%*	*23 - 102*		B2C1217	03/16/2022	*03/22/22 21:28*	S4
Surrogate: Phenol-d6	*0%*	*14 - 104*		B2C1217	03/16/2022	*03/22/22 21:28*	S4

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612		Reported :	04/14/2022

Client Sample ID: Sample 21
Lab ID: 2200372-03

Title 22 Metals by ICP-AES EPA 6010B

Analyst: WT

Analyte	Result (mg/kg dry)	PQL (mg/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	**5.8**	2.0	1	B2C1236	03/18/2022	03/18/22 16:40	
Arsenic	**9.1**	1.0	1	B2C1236	03/18/2022	03/18/22 16:40	
Barium	**280**	1.0	1	B2C1236	03/18/2022	03/18/22 16:40	
Beryllium	ND	1.0	1	B2C1236	03/18/2022	03/18/22 16:40	
Cadmium	**3.4**	1.0	1	B2C1236	03/18/2022	03/18/22 16:40	
Chromium	**85**	1.0	1	B2C1236	03/18/2022	03/18/22 16:40	
Cobalt	**7.4**	1.0	1	B2C1236	03/18/2022	03/18/22 16:40	
Copper	**120**	2.0	1	B2C1236	03/18/2022	03/18/22 16:40	
Lead	**190**	1.0	1	B2C1236	03/18/2022	03/18/22 16:40	
Molybdenum	**7.9**	1.0	1	B2C1236	03/18/2022	03/18/22 16:40	
Nickel	**41**	1.0	1	B2C1236	03/18/2022	03/18/22 16:40	
Selenium	**4.9**	1.0	1	B2C1236	03/18/2022	03/18/22 16:40	
Silver	ND	1.0	1	B2C1236	03/18/2022	03/18/22 16:40	
Thallium	ND	1.0	1	B2C1236	03/18/2022	03/18/22 16:40	
Vanadium	**40**	1.0	1	B2C1236	03/18/2022	03/18/22 16:40	
Zinc	**2200**	1.0	1	B2C1236	03/18/2022	03/18/22 16:40	

Diesel and Oil Range Organics by EPA 8015B

Analyst: JV

Analyte	Result (mg/kg dry)	PQL (mg/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	**640**	200	20	B2C1215	03/16/2022	03/17/22 20:15	D10
ORO	**900**	200	20	B2C1215	03/16/2022	03/17/22 20:15	D10
Surrogate: p-Terphenyl	*143 %*	*62 - 141*		B2C1215	03/16/2022	*03/17/22 20:15*	S10

Polychlorinated Biphenyls by EPA 8082

Analyst: KL

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aroclor 1016	ND	16	1	B2C1216	03/16/2022	03/17/22 18:10	
Aroclor 1221	ND	16	1	B2C1216	03/16/2022	03/17/22 18:10	
Aroclor 1232	ND	16	1	B2C1216	03/16/2022	03/17/22 18:10	
Aroclor 1242	ND	16	1	B2C1216	03/16/2022	03/17/22 18:10	
Aroclor 1248	ND	16	1	B2C1216	03/16/2022	03/17/22 18:10	
Aroclor 1254	ND	16	1	B2C1216	03/16/2022	03/17/22 18:10	
Aroclor 1260	ND	16	1	B2C1216	03/16/2022	03/17/22 18:10	
Surrogate: Decachlorobiphenyl	*0%*	*0 - 87*		B2C1216	03/16/2022	*03/17/22 18:10*	

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612		Reported :	04/14/2022

Client Sample ID: Sample 21
Lab ID: 2200372-03

Polychlorinated Biphenyls by EPA 8082

Analyst: KL

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Surrogate: Tetrachloro-m-xylene	*0%*	*0 - 103*		B2C1216	03/16/2022	*03/17/22 18:10*	

Semivolatile Organic Compounds by EPA 8270C

Analyst: EB

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,2,4-Trichlorobenzene	ND	22000	100	B2C1217	03/16/2022	03/24/22 12:32	D10
1,2-Dichlorobenzene	ND	22000	100	B2C1217	03/16/2022	03/24/22 12:32	D10
1,3-Dichlorobenzene	ND	22000	100	B2C1217	03/16/2022	03/24/22 12:32	D10
1,4-Dichlorobenzene	ND	22000	100	B2C1217	03/16/2022	03/24/22 12:32	D10
2,4,5-Trichlorophenol	ND	22000	100	B2C1217	03/16/2022	03/24/22 12:32	D10
2,4,6-Trichlorophenol	ND	22000	100	B2C1217	03/16/2022	03/24/22 12:32	D10
2,4-Dichlorophenol	ND	110000	100	B2C1217	03/16/2022	03/24/22 12:32	D10
2,4-Dimethylphenol	ND	22000	100	B2C1217	03/16/2022	03/24/22 12:32	D10
2,4-Dinitrophenol	ND	110000	100	B2C1217	03/16/2022	03/24/22 12:32	D10
2,4-Dinitrotoluene	ND	22000	100	B2C1217	03/16/2022	03/24/22 12:32	D10
2,6-Dinitrotoluene	ND	22000	100	B2C1217	03/16/2022	03/24/22 12:32	D10
2-Chloronaphthalene	ND	22000	100	B2C1217	03/16/2022	03/24/22 12:32	D10
2-Chlorophenol	ND	22000	100	B2C1217	03/16/2022	03/24/22 12:32	D10
2-Methylnaphthalene	ND	22000	100	B2C1217	03/16/2022	03/24/22 12:32	D10
2-Methylphenol	ND	22000	100	B2C1217	03/16/2022	03/24/22 12:32	D10
2-Nitroaniline	ND	110000	100	B2C1217	03/16/2022	03/24/22 12:32	D10
2-Nitrophenol	ND	22000	100	B2C1217	03/16/2022	03/24/22 12:32	D10
3,3´-Dichlorobenzidine	ND	45000	100	B2C1217	03/16/2022	03/24/22 12:32	D10
3-Nitroaniline	ND	110000	100	B2C1217	03/16/2022	03/24/22 12:32	D10
4,6-Dinitro-2-methyphenol	ND	110000	100	B2C1217	03/16/2022	03/24/22 12:32	D10
4-Bromophenyl-phenylether	ND	22000	100	B2C1217	03/16/2022	03/24/22 12:32	D10
4-Chloro-3-methylphenol	ND	45000	100	B2C1217	03/16/2022	03/24/22 12:32	D10
4-Chloroaniline	ND	45000	100	B2C1217	03/16/2022	03/24/22 12:32	D10
4-Chlorophenyl-phenylether	ND	22000	100	B2C1217	03/16/2022	03/24/22 12:32	D10
4-Methylphenol	ND	22000	100	B2C1217	03/16/2022	03/24/22 12:32	D10
4-Nitroaniline	ND	110000	100	B2C1217	03/16/2022	03/24/22 12:32	D10
4-Nitrophenol	ND	22000	100	B2C1217	03/16/2022	03/24/22 12:32	D10
Acenaphthene	ND	22000	100	B2C1217	03/16/2022	03/24/22 12:32	D10
Acenaphthylene	ND	22000	100	B2C1217	03/16/2022	03/24/22 12:32	D10
Anthracene	ND	22000	100	B2C1217	03/16/2022	03/24/22 12:32	D10
Benzidine (M)	ND	110000	100	B2C1217	03/16/2022	03/24/22 12:32	D10
Benzo(a)anthracene	ND	22000	100	B2C1217	03/16/2022	03/24/22 12:32	D10

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612		Reported :	04/14/2022

Client Sample ID: Sample 21
Lab ID: 2200372-03

Semivolatile Organic Compounds by EPA 8270C **Analyst: EB**

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Benzo(a)pyrene	ND	22000	100	B2C1217	03/16/2022	03/24/22 12:32	D10
Benzo(b)fluoranthene	ND	22000	100	B2C1217	03/16/2022	03/24/22 12:32	D10
Benzo(g,h,i)perylene	ND	22000	100	B2C1217	03/16/2022	03/24/22 12:32	D10
Benzo(k)fluoranthene	ND	22000	100	B2C1217	03/16/2022	03/24/22 12:32	D10
Benzoic acid	ND	110000	100	B2C1217	03/16/2022	03/24/22 12:32	D10
Benzyl alcohol	ND	45000	100	B2C1217	03/16/2022	03/24/22 12:32	D10
bis(2-chloroethoxy)methane	ND	22000	100	B2C1217	03/16/2022	03/24/22 12:32	D10
bis(2-Chloroethyl)ether	ND	22000	100	B2C1217	03/16/2022	03/24/22 12:32	D10
bis(2-chloroisopropyl)ether	ND	22000	100	B2C1217	03/16/2022	03/24/22 12:32	D10
bis(2-ethylhexyl)phthalate	ND	22000	100	B2C1217	03/16/2022	03/24/22 12:32	D10
Butylbenzylphthalate	ND	22000	100	B2C1217	03/16/2022	03/24/22 12:32	D10
Chrysene	ND	22000	100	B2C1217	03/16/2022	03/24/22 12:32	D10
Di-n-butylphthalate	ND	22000	100	B2C1217	03/16/2022	03/24/22 12:32	D10
Di-n-octylphthalate	ND	22000	100	B2C1217	03/16/2022	03/24/22 12:32	D10
Dibenz(a,h)anthracene	ND	22000	100	B2C1217	03/16/2022	03/24/22 12:32	D10
Dibenzofuran	ND	22000	100	B2C1217	03/16/2022	03/24/22 12:32	D10
Diethyl phthalate	ND	22000	100	B2C1217	03/16/2022	03/24/22 12:32	D10
Dimethyl phthalate	ND	22000	100	B2C1217	03/16/2022	03/24/22 12:32	D10
Fluoranthene	ND	22000	100	B2C1217	03/16/2022	03/24/22 12:32	D10
Fluorene	ND	22000	100	B2C1217	03/16/2022	03/24/22 12:32	D10
Hexachlorobenzene	ND	22000	100	B2C1217	03/16/2022	03/24/22 12:32	D10
Hexachlorobutadiene	ND	45000	100	B2C1217	03/16/2022	03/24/22 12:32	D10
Hexachlorocyclopentadiene	ND	45000	100	B2C1217	03/16/2022	03/24/22 12:32	D10
Hexachloroethane	ND	22000	100	B2C1217	03/16/2022	03/24/22 12:32	D10
Indeno(1,2,3-cd)pyrene	ND	22000	100	B2C1217	03/16/2022	03/24/22 12:32	D10
Isophorone	ND	22000	100	B2C1217	03/16/2022	03/24/22 12:32	D10
N-Nitroso-di-n propylamine	ND	22000	100	B2C1217	03/16/2022	03/24/22 12:32	D10
N-Nitrosodiphenylamine	ND	22000	100	B2C1217	03/16/2022	03/24/22 12:32	D10
Naphthalene	ND	22000	100	B2C1217	03/16/2022	03/24/22 12:32	D10
Nitrobenzene	ND	22000	100	B2C1217	03/16/2022	03/24/22 12:32	D10
Pentachlorophenol	ND	110000	100	B2C1217	03/16/2022	03/24/22 12:32	D10
Phenanthrene	ND	22000	100	B2C1217	03/16/2022	03/24/22 12:32	D10
Phenol	ND	22000	100	B2C1217	03/16/2022	03/24/22 12:32	D10
Pyrene	ND	22000	100	B2C1217	03/16/2022	03/24/22 12:32	D10
Pyridine	ND	110000	100	B2C1217	03/16/2022	03/24/22 12:32	D10
Surrogate: 1,2-Dichlorobenzene-d4	*27.0 %*	*23 - 102*		B2C1217	03/16/2022	*03/24/22 12:32*	
Surrogate: 2,4,6-Tribromophenol	*0%*	*3 - 138*		B2C1217	03/16/2022	*03/24/22 12:32*	S4
Surrogate: 2-Chlorophenol-d4	*11.3 %*	*18 - 105*		B2C1217	03/16/2022	*03/24/22 12:32*	S4
Surrogate: 2-Fluorobiphenyl	*54.0 %*	*34 - 106*		B2C1217	03/16/2022	*03/24/22 12:32*	

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612		Reported :	04/14/2022

Client Sample ID: Sample 21
Lab ID: 2200372-03

Semivolatile Organic Compounds by EPA 8270C **Analyst: EB**

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Surrogate: 2-Fluorophenol	*0%*	*16 - 94*		B2C1217	03/16/2022	*03/24/22 12:32*	S4
Surrogate: 4-Terphenyl-d14	*65.0 %*	*31 - 130*		B2C1217	03/16/2022	*03/24/22 12:32*	
Surrogate: Nitrobenzene-d5	*0%*	*23 - 102*		B2C1217	03/16/2022	*03/24/22 12:32*	S4
Surrogate: Phenol-d6	*0%*	*14 - 104*		B2C1217	03/16/2022	*03/24/22 12:32*	S4

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612		Reported :	04/14/2022

Client Sample ID: Sample 22
Lab ID: 2200372-04

Title 22 Metals by ICP-AES EPA 6010B

Analyst: WT

Analyte	Result (mg/kg dry)	PQL (mg/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	**4.5**	2.1	1	B2C1236	03/18/2022	03/18/22 16:42	
Arsenic	**3.9**	1.1	1	B2C1236	03/18/2022	03/18/22 16:42	
Barium	**160**	1.1	1	B2C1236	03/18/2022	03/18/22 16:42	
Beryllium	ND	1.1	1	B2C1236	03/18/2022	03/18/22 16:42	
Cadmium	**2.8**	1.1	1	B2C1236	03/18/2022	03/18/22 16:42	
Chromium	**64**	1.1	1	B2C1236	03/18/2022	03/18/22 16:42	
Cobalt	**6.8**	1.1	1	B2C1236	03/18/2022	03/18/22 16:42	
Copper	**93**	2.1	1	B2C1236	03/18/2022	03/18/22 16:42	
Lead	**120**	1.1	1	B2C1236	03/18/2022	03/18/22 16:42	
Molybdenum	**6.5**	1.1	1	B2C1236	03/18/2022	03/18/22 16:42	
Nickel	**29**	1.1	1	B2C1236	03/18/2022	03/18/22 16:42	
Selenium	**4.1**	1.1	1	B2C1236	03/18/2022	03/18/22 16:42	
Silver	ND	1.1	1	B2C1236	03/18/2022	03/18/22 16:42	
Thallium	ND	1.1	1	B2C1236	03/18/2022	03/18/22 16:42	
Vanadium	**25**	1.1	1	B2C1236	03/18/2022	03/18/22 16:42	
Zinc	**2800**	11	10	B2C1236	03/18/2022	03/18/22 18:07	

Diesel and Oil Range Organics by EPA 8015B

Analyst: JV

Analyte	Result (mg/kg dry)	PQL (mg/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	**1300**	210	20	B2C1215	03/16/2022	03/17/22 20:35	D10
ORO	**2300**	210	20	B2C1215	03/16/2022	03/17/22 20:35	D10
Surrogate: p-Terphenyl	*100 %*	*62 - 141*		B2C1215	03/16/2022	*03/17/22 20:35*	

Polychlorinated Biphenyls by EPA 8082

Analyst: KL

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aroclor 1016	ND	17	1	B2C1216	03/16/2022	03/17/22 18:29	
Aroclor 1221	ND	17	1	B2C1216	03/16/2022	03/17/22 18:29	
Aroclor 1232	ND	17	1	B2C1216	03/16/2022	03/17/22 18:29	
Aroclor 1242	ND	17	1	B2C1216	03/16/2022	03/17/22 18:29	
Aroclor 1248	ND	17	1	B2C1216	03/16/2022	03/17/22 18:29	
Aroclor 1254	ND	17	1	B2C1216	03/16/2022	03/17/22 18:29	
Aroclor 1260	ND	17	1	B2C1216	03/16/2022	03/17/22 18:29	
Surrogate: Decachlorobiphenyl	*0%*	*0 - 87*		B2C1216	03/16/2022	*03/17/22 18:29*	

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612		Reported :	04/14/2022

Client Sample ID: Sample 22
Lab ID: 2200372-04

Polychlorinated Biphenyls by EPA 8082

Analyst: KL

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Surrogate: Tetrachloro-m-xylene	*0%*	*0 - 103*		B2C1216	03/16/2022	*03/17/22 18:29*	

Semivolatile Organic Compounds by EPA 8270C

Analyst: EB

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,2,4-Trichlorobenzene	ND	23000	100	B2C1217	03/16/2022	03/24/22 12:59	D10
1,2-Dichlorobenzene	ND	23000	100	B2C1217	03/16/2022	03/24/22 12:59	D10
1,3-Dichlorobenzene	ND	23000	100	B2C1217	03/16/2022	03/24/22 12:59	D10
1,4-Dichlorobenzene	ND	23000	100	B2C1217	03/16/2022	03/24/22 12:59	D10
2,4,5-Trichlorophenol	ND	23000	100	B2C1217	03/16/2022	03/24/22 12:59	D10
2,4,6-Trichlorophenol	ND	23000	100	B2C1217	03/16/2022	03/24/22 12:59	D10
2,4-Dichlorophenol	ND	120000	100	B2C1217	03/16/2022	03/24/22 12:59	D10
2,4-Dimethylphenol	ND	23000	100	B2C1217	03/16/2022	03/24/22 12:59	D10
2,4-Dinitrophenol	ND	120000	100	B2C1217	03/16/2022	03/24/22 12:59	D10
2,4-Dinitrotoluene	ND	23000	100	B2C1217	03/16/2022	03/24/22 12:59	D10
2,6-Dinitrotoluene	ND	23000	100	B2C1217	03/16/2022	03/24/22 12:59	D10
2-Chloronaphthalene	ND	23000	100	B2C1217	03/16/2022	03/24/22 12:59	D10
2-Chlorophenol	ND	23000	100	B2C1217	03/16/2022	03/24/22 12:59	D10
2-Methylnaphthalene	ND	23000	100	B2C1217	03/16/2022	03/24/22 12:59	D10
2-Methylphenol	ND	23000	100	B2C1217	03/16/2022	03/24/22 12:59	D10
2-Nitroaniline	ND	120000	100	B2C1217	03/16/2022	03/24/22 12:59	D10
2-Nitrophenol	ND	23000	100	B2C1217	03/16/2022	03/24/22 12:59	D10
3,3´-Dichlorobenzidine	ND	47000	100	B2C1217	03/16/2022	03/24/22 12:59	D10
3-Nitroaniline	ND	120000	100	B2C1217	03/16/2022	03/24/22 12:59	D10
4,6-Dinitro-2-methyphenol	ND	120000	100	B2C1217	03/16/2022	03/24/22 12:59	D10
4-Bromophenyl-phenylether	ND	23000	100	B2C1217	03/16/2022	03/24/22 12:59	D10
4-Chloro-3-methylphenol	ND	47000	100	B2C1217	03/16/2022	03/24/22 12:59	D10
4-Chloroaniline	ND	47000	100	B2C1217	03/16/2022	03/24/22 12:59	D10
4-Chlorophenyl-phenylether	ND	23000	100	B2C1217	03/16/2022	03/24/22 12:59	D10
4-Methylphenol	ND	23000	100	B2C1217	03/16/2022	03/24/22 12:59	D10
4-Nitroaniline	ND	120000	100	B2C1217	03/16/2022	03/24/22 12:59	D10
4-Nitrophenol	ND	23000	100	B2C1217	03/16/2022	03/24/22 12:59	D10
Acenaphthene	ND	23000	100	B2C1217	03/16/2022	03/24/22 12:59	D10
Acenaphthylene	ND	23000	100	B2C1217	03/16/2022	03/24/22 12:59	D10
Anthracene	ND	23000	100	B2C1217	03/16/2022	03/24/22 12:59	D10
Benzidine (M)	ND	120000	100	B2C1217	03/16/2022	03/24/22 12:59	D10
Benzo(a)anthracene	ND	23000	100	B2C1217	03/16/2022	03/24/22 12:59	D10

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612		Reported :	04/14/2022

Client Sample ID: Sample 22
Lab ID: 2200372-04

Semivolatile Organic Compounds by EPA 8270C **Analyst: EB**

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Benzo(a)pyrene	ND	23000	100	B2C1217	03/16/2022	03/24/22 12:59	D10
Benzo(b)fluoranthene	ND	23000	100	B2C1217	03/16/2022	03/24/22 12:59	D10
Benzo(g,h,i)perylene	ND	23000	100	B2C1217	03/16/2022	03/24/22 12:59	D10
Benzo(k)fluoranthene	ND	23000	100	B2C1217	03/16/2022	03/24/22 12:59	D10
Benzoic acid	ND	120000	100	B2C1217	03/16/2022	03/24/22 12:59	D10
Benzyl alcohol	ND	47000	100	B2C1217	03/16/2022	03/24/22 12:59	D10
bis(2-chloroethoxy)methane	ND	23000	100	B2C1217	03/16/2022	03/24/22 12:59	D10
bis(2-Chloroethyl)ether	ND	23000	100	B2C1217	03/16/2022	03/24/22 12:59	D10
bis(2-chloroisopropyl)ether	ND	23000	100	B2C1217	03/16/2022	03/24/22 12:59	D10
bis(2-ethylhexyl)phthalate	ND	23000	100	B2C1217	03/16/2022	03/24/22 12:59	D10
Butylbenzylphthalate	ND	23000	100	B2C1217	03/16/2022	03/24/22 12:59	D10
Chrysene	ND	23000	100	B2C1217	03/16/2022	03/24/22 12:59	D10
Di-n-butylphthalate	ND	23000	100	B2C1217	03/16/2022	03/24/22 12:59	D10
Di-n-octylphthalate	ND	23000	100	B2C1217	03/16/2022	03/24/22 12:59	D10
Dibenz(a,h)anthracene	ND	23000	100	B2C1217	03/16/2022	03/24/22 12:59	D10
Dibenzofuran	ND	23000	100	B2C1217	03/16/2022	03/24/22 12:59	D10
Diethyl phthalate	ND	23000	100	B2C1217	03/16/2022	03/24/22 12:59	D10
Dimethyl phthalate	ND	23000	100	B2C1217	03/16/2022	03/24/22 12:59	D10
Fluoranthene	ND	23000	100	B2C1217	03/16/2022	03/24/22 12:59	D10
Fluorene	ND	23000	100	B2C1217	03/16/2022	03/24/22 12:59	D10
Hexachlorobenzene	ND	23000	100	B2C1217	03/16/2022	03/24/22 12:59	D10
Hexachlorobutadiene	ND	47000	100	B2C1217	03/16/2022	03/24/22 12:59	D10
Hexachlorocyclopentadiene	ND	47000	100	B2C1217	03/16/2022	03/24/22 12:59	D10
Hexachloroethane	ND	23000	100	B2C1217	03/16/2022	03/24/22 12:59	D10
Indeno(1,2,3-cd)pyrene	ND	23000	100	B2C1217	03/16/2022	03/24/22 12:59	D10
Isophorone	ND	23000	100	B2C1217	03/16/2022	03/24/22 12:59	D10
N-Nitroso-di-n propylamine	ND	23000	100	B2C1217	03/16/2022	03/24/22 12:59	D10
N-Nitrosodiphenylamine	ND	23000	100	B2C1217	03/16/2022	03/24/22 12:59	D10
Naphthalene	ND	23000	100	B2C1217	03/16/2022	03/24/22 12:59	D10
Nitrobenzene	ND	23000	100	B2C1217	03/16/2022	03/24/22 12:59	D10
Pentachlorophenol	ND	120000	100	B2C1217	03/16/2022	03/24/22 12:59	D10
Phenanthrene	ND	23000	100	B2C1217	03/16/2022	03/24/22 12:59	D10
Phenol	ND	23000	100	B2C1217	03/16/2022	03/24/22 12:59	D10
Pyrene	ND	23000	100	B2C1217	03/16/2022	03/24/22 12:59	D10
Pyridine	ND	120000	100	B2C1217	03/16/2022	03/24/22 12:59	D10
Surrogate: 1,2-Dichlorobenzene-d4	*0%*	*23 - 102*		B2C1217	03/16/2022	*03/24/22 12:59*	S4
Surrogate: 2,4,6-Tribromophenol	*0%*	*3 - 138*		B2C1217	03/16/2022	*03/24/22 12:59*	S4
Surrogate: 2-Chlorophenol-d4	*12.0 %*	*18 - 105*		B2C1217	03/16/2022	*03/24/22 12:59*	S4
Surrogate: 2-Fluorobiphenyl	*68.0 %*	*34 - 106*		B2C1217	03/16/2022	*03/24/22 12:59*	

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GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612		Reported :	04/14/2022

Client Sample ID: Sample 22
Lab ID: 2200372-04

Semivolatile Organic Compounds by EPA 8270C **Analyst: EB**

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Surrogate: 2-Fluorophenol	*0%*	*16 - 94*		B2C1217	03/16/2022	*03/24/22 12:59*	S4
Surrogate: 4-Terphenyl-d14	*76.0 %*	*31 - 130*		B2C1217	03/16/2022	*03/24/22 12:59*	
Surrogate: Nitrobenzene-d5	*0%*	*23 - 102*		B2C1217	03/16/2022	*03/24/22 12:59*	S4
Surrogate: Phenol-d6	*0%*	*14 - 104*		B2C1217	03/16/2022	*03/24/22 12:59*	S4

Certificate of Analysis

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19200 Von Karman Ave., Suite 800		Report To :	Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612		Reported :	04/14/2022

QUALITY CONTROL SECTION

Percent Moisture - Quality Control

Analyte	Result % by Weight	PQL % by Weight	MDL % by Weigh	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B2C1255 - No_Prep_WC1_S										
Duplicate (B2C1255-DUP1)			**Source: 2200369-10**			Prepared: 3/18/2022 Analyzed: 3/21/2022				
Percent Solids	91.1005	0.10	0.10		92.8302			1.88	30	

Certificate of Analysis

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19200 Von Karman Ave., Suite 800		Report To :	Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612		Reported :	04/14/2022

Title 22 Metals by ICP-AES EPA 6010B - Quality Control

Analyte	Result (mg/kg dry)	PQL (mg/kg dry)	MDL (mg/kg dry)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B2C1236 - EPA 3050B_S										
Matrix Spike (B2C1236-MS1)			**Source: 2200372-01**			Prepared: 3/17/2022 Analyzed: 3/18/2022				
Antimony	34.2173	2.0	0.51	25.2604	8.36762	102	0 - 102			
Arsenic	29.8542	1.0	0.12	25.2604	3.10120	106	55 - 117			
Barium	240.309	1.0	0.12	25.2604	219.914	80.7	11 - 177			
Beryllium	24.7613	1.0	0.03	25.2705	0.638454	95.5	64 - 115			
Cadmium	31.2320	1.0	0.14	25.2604	4.78127	105	62 - 116			
Chromium	126.090	1.0	0.26	25.2604	102.723	92.5	42 - 145			
Cobalt	34.6173	1.0	0.07	25.2604	8.57946	103	60 - 126			
Copper	157.775	2.0	0.19	25.2604	135.106	89.7	37 - 163			
Lead	200.634	1.0	0.18	25.2604	180.830	78.4	26 - 161			
Molybdenum	33.8603	1.0	0.12	25.2604	8.76638	99.3	31 - 122			
Nickel	64.7332	1.0	0.18	25.2604	41.1815	93.2	52 - 130			
Selenium	35.8861	1.0	0.41	25.2604	8.67625	108	25 - 129			
Silver	11.6430	1.0	0.12	12.6302	ND	92.2	48 - 133			
Thallium	21.7118	1.0	0.38	25.2604	ND	86.0	25 - 119			
Vanadium	53.6642	1.0	0.06	25.2604	29.7569	94.6	51 - 141			
Zinc	2664.84	10	1.5	25.2604	2604.38	239	8 - 170			M2
Matrix Spike Dup (B2C1236-MSD1)			**Source: 2200372-01**			Prepared: 3/17/2022 Analyzed: 3/18/2022				
Antimony	33.4619	2.0	0.51	25.2604	8.36762	99.3	0 - 102	2.23	20	
Arsenic	29.1495	1.0	0.12	25.2604	3.10120	103	55 - 117	2.39	20	
Barium	240.997	1.0	0.12	25.2604	219.914	83.5	11 - 177	0.286	20	
Beryllium	24.8447	1.0	0.03	25.2705	0.638454	95.8	64 - 115	0.336	20	
Cadmium	30.8246	1.0	0.14	25.2604	4.78127	103	62 - 116	1.31	20	
Chromium	126.726	1.0	0.26	25.2604	102.723	95.0	42 - 145	0.503	20	
Cobalt	34.3183	1.0	0.07	25.2604	8.57946	102	60 - 126	0.868	20	
Copper	156.802	2.0	0.19	25.2604	135.106	85.9	37 - 163	0.618	20	
Lead	197.895	1.0	0.18	25.2604	180.830	67.6	26 - 161	1.37	20	
Molybdenum	33.8928	1.0	0.12	25.2604	8.76638	99.5	31 - 122	0.0959	20	
Nickel	64.0095	1.0	0.18	25.2604	41.1815	90.4	52 - 130	1.12	20	
Selenium	35.3838	1.0	0.41	25.2604	8.67625	106	25 - 129	1.41	20	
Silver	11.4755	1.0	0.12	12.6302	ND	90.9	48 - 133	1.45	20	
Thallium	22.0707	1.0	0.38	25.2604	ND	87.4	25 - 119	1.64	20	
Vanadium	53.9443	1.0	0.06	25.2604	29.7569	95.8	51 - 141	0.521	20	
Zinc	2654.23	10	1.5	25.2604	2604.38	197	8 - 170	0.399	20	M2

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612		Reported :	04/14/2022

Title 22 Metals by ICP-AES EPA 6010B - Quality Control

Analyte	Result (mg/kg wet)	PQL (mg/kg wet)	MDL (mg/kg wet)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B2C1236 - EPA 3050B_S										
Blank (B2C1236-BLK1)						Prepared: 3/17/2022 Analyzed: 3/18/2022				
Antimony	ND	2.0	0.51							
Arsenic	ND	1.0	0.12							
Barium	ND	1.0	0.12							
Beryllium	ND	1.0	0.03							
Cadmium	ND	1.0	0.14							
Chromium	ND	1.0	0.26							
Cobalt	ND	1.0	0.07							
Copper	ND	2.0	0.19							
Lead	ND	1.0	0.18							
Molybdenum	ND	1.0	0.12							
Nickel	ND	1.0	0.18							
Selenium	ND	1.0	0.40							
Silver	ND	1.0	0.12							
Thallium	ND	1.0	0.38							
Vanadium	ND	1.0	0.06							
Zinc	ND	1.0	0.15							
LCS (B2C1236-BS1)						Prepared: 3/17/2022 Analyzed: 3/18/2022				
Antimony	25.6464	2.0	0.51	25.0000		103	80 - 120			
Arsenic	26.0622	1.0	0.12	25.0000		104	80 - 120			
Barium	25.4201	1.0	0.12	25.0000		102	80 - 120			
Beryllium	25.6245	1.0	0.03	25.0100		102	80 - 120			
Cadmium	25.6148	1.0	0.14	25.0000		102	80 - 120			
Chromium	26.1466	1.0	0.26	25.0000		105	80 - 120			
Cobalt	25.8614	1.0	0.07	25.0000		103	80 - 120			
Copper	25.2061	2.0	0.19	25.0000		101	80 - 120			
Lead	26.3047	1.0	0.18	25.0000		105	80 - 120			
Molybdenum	27.4077	1.0	0.12	25.0000		110	80 - 120			
Nickel	25.0676	1.0	0.18	25.0000		100	80 - 120			
Selenium	26.5078	1.0	0.40	25.0000		106	80 - 120			
Silver	11.7234	1.0	0.12	12.5000		93.8	80 - 120			
Thallium	26.8904	1.0	0.38	25.0000		108	80 - 120			
Vanadium	24.9378	1.0	0.06	25.0000		99.8	80 - 120			
Zinc	27.4504	1.0	0.15	25.0000		110	80 - 120			

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19200 Von Karman Ave., Suite 800		Report To :	Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612		Reported :	04/14/2022

Hexavalent Chromium by EPA 7196A/3060A - Quality Control

Analyte	Result (mg/kg dry)	PQL (mg/kg dry)	MDL (mg/kg dry)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B2C1256 - EPA 3060A_S (WC)										
Matrix Spike (B2C1256-MS1)			**Source: 2200369-05**			Prepared: 3/18/2022 Analyzed: 3/18/2022				
Hexavalent Chromium	39.7537	1.0	0.41	52.4456	ND	75.8	75 - 125			
Matrix Spike (B2C1256-MS2)			**Source: 2200369-05**			Prepared: 3/18/2022 Analyzed: 3/18/2022				
Hexavalent Chromium	1940.49	52	20	2192.64	ND	88.5	75 - 125			
Matrix Spike Dup (B2C1256-MSD1)			**Source: 2200369-05**			Prepared: 3/18/2022 Analyzed: 3/18/2022				
Hexavalent Chromium	44.6836	1.0	0.41	52.4456	ND	85.2	75 - 125	11.7	20	

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Irvine , CA 92612		Reported :	04/14/2022

Hexavalent Chromium by EPA 7196A/3060A - Quality Control

Analyte	Result (mg/kg wet)	PQL (mg/kg wet)	MDL (mg/kg wet)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B2C1256 - EPA 3060A_S (WC)										
Blank (B2C1256-BLK1)						Prepared: 3/18/2022 Analyzed: 3/18/2022				
Hexavalent Chromium	ND	1.0	0.39							
LCS (B2C1256-BS1)						Prepared: 3/18/2022 Analyzed: 3/18/2022				
Hexavalent Chromium	44.5000	1.0	0.39	50.0000		89.0	80 - 120			

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19200 Von Karman Ave., Suite 800		Report To :	Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612		Reported :	04/14/2022

Mercury by AA (Cold Vapor) EPA 7471A - Quality Control

Analyte	Result (mg/kg wet)	PQL (mg/kg wet)	MDL (mg/kg wet)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B2C1219 - EPA 7471_S										
Blank (B2C1219-BLK1)						Prepared: 3/17/2022 Analyzed: 3/17/2022				
Mercury	ND	0.10	0.01							
LCS (B2C1219-BS1)						Prepared: 3/17/2022 Analyzed: 3/17/2022				
Mercury	0.391891	0.10	0.01	0.416667		94.1	80 - 120			
Matrix Spike (B2C1219-MS1)			**Source: 2200359-01**			Prepared: 3/17/2022 Analyzed: 3/17/2022				
Mercury	0.484932	0.10	0.01	0.416667	0.118250	88.0	70 - 130			
Matrix Spike Dup (B2C1219-MSD1)			**Source: 2200359-01**			Prepared: 3/17/2022 Analyzed: 3/17/2022				
Mercury	0.541676	0.10	0.01	0.416667	0.118250	102	70 - 130	11.1	20	

Certificate of Analysis

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19200 Von Karman Ave., Suite 800		Report To :	Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612		Reported :	04/14/2022

Mercury by AA (Cold Vapor) EPA 7471A - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B2C1219 - EPA 7471_S									
Post Spike (B2C1219-PS1)			**Source: 2200359-01**		Prepared: 3/17/2022 Analyzed: 3/17/2022				
Mercury	0.005718		5.00000E-3	0.001419	86.0	85 - 115			

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19200 Von Karman Ave., Suite 800		Report To :	Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612		Reported :	04/14/2022

Diesel and Oil Range Organics by EPA 8015B - Quality Control

Analyte	Result (mg/kg wet)	PQL (mg/kg wet)	MDL (mg/kg wet)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B2C1215 - GCSEMI_DRO_S										
Blank (B2C1215-BLK1)						Prepared: 3/16/2022 Analyzed: 3/17/2022				
DRO	ND	10	3.6							
ORO	ND	10	3.6							
Surrogate: p-Terphenyl	*78.68*			*80.0000*		*98.3*	*62 - 141*			
LCS (B2C1215-BS1)						Prepared: 3/16/2022 Analyzed: 3/17/2022				
DRO	998.024	10	3.6	1000.00		99.8	56 - 139			
Surrogate: p-Terphenyl	*83.69*			*80.0000*		*105*	*62 - 141*			
Matrix Spike (B2C1215-MS1)			**Source: 2200386-03**			Prepared: 3/16/2022 Analyzed: 3/17/2022				
DRO	1164.29	10	3.6	1000.00	7.32900	116	38 - 161			
Surrogate: p-Terphenyl	*116.2*			*80.0000*		*145*	*62 - 141*			S10
Matrix Spike Dup (B2C1215-MSD1)			**Source: 2200386-03**			Prepared: 3/16/2022 Analyzed: 3/17/2022				
DRO	887.481	10	3.6	1000.00	7.32900	88.0	38 - 161	27.0	20	R
Surrogate: p-Terphenyl	*108.7*			*80.0000*		*136*	*62 - 141*			

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19200 Von Karman Ave., Suite 800		Report To :	Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612		Reported :	04/14/2022

Polychlorinated Biphenyls by EPA 8082 - Quality Control

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	MDL (ug/kg dry)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B2C1216 - GCSEMI_PCB/PEST_S										
Matrix Spike (B2C1216-MS1)			**Source: 2200369-03**			Prepared: 3/16/2022 Analyzed: 3/17/2022				
Aroclor 1016	ND	17	2.1	177.187	ND	NR	0 - 135			
Aroclor 1260	ND	17	2.1	177.187	ND	NR	0 - 127			
Surrogate: Decachlorobiphenyl	*0.000*			*17.7187*		*NR*	*0 - 87*			
Surrogate: Tetrachloro-m-xylene	*0.000*			*17.7187*		*NR*	*0 - 103*			
Matrix Spike Dup (B2C1216-MSD1)			**Source: 2200369-03**			Prepared: 3/16/2022 Analyzed: 3/17/2022				
Aroclor 1016	ND	17	2.1	177.187	ND	NR	0 - 135	NR	20	
Aroclor 1260	ND	17	2.1	177.187	ND	NR	0 - 127	NR	20	
Surrogate: Decachlorobiphenyl	*0.000*			*17.7187*		*NR*	*0 - 87*			
Surrogate: Tetrachloro-m-xylene	*0.000*			*17.7187*		*NR*	*0 - 103*			

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612		Reported :	04/14/2022

Polychlorinated Biphenyls by EPA 8082 - Quality Control

Analyte	Result (ug/kg wet)	PQL (ug/kg wet)	MDL (ug/kg wet)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B2C1216 - GCSEMI_PCB/PEST_S										
Blank (B2C1216-BLK1)						Prepared: 3/16/2022 Analyzed: 3/17/2022				
Aroclor 1016	ND	16	1.9							
Aroclor 1221	ND	16	1.9							
Aroclor 1232	ND	16	1.9							
Aroclor 1242	ND	16	1.9							
Aroclor 1248	ND	16	1.9							
Aroclor 1254	ND	16	1.9							
Aroclor 1260	ND	16	1.9							
Surrogate: Decachlorobiphenyl	*0.000*			*16.6667*		*NR*	*0 - 87*			
Surrogate: Tetrachloro-m-xylene	*0.000*			*16.6667*		*NR*	*0 - 103*			
LCS (B2C1216-BS1)						Prepared: 3/16/2022 Analyzed: 3/17/2022				
Aroclor 1016	124.235	16	1.9	166.667		74.5	11 - 108			
Aroclor 1260	124.587	16	1.9	166.667		74.8	19 - 112			
Surrogate: Decachlorobiphenyl	*9.971*			*16.6667*		*59.8*	*0 - 87*			
Surrogate: Tetrachloro-m-xylene	*11.13*			*16.6667*		*66.8*	*0 - 103*			

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612		Reported :	04/14/2022

Semivolatile Organic Compounds by EPA 8270C - Quality Control

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	MDL (ug/kg dry)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B2C1217 - MSSEMI_NAL										
Matrix Spike (B2C1217-MS1)			**Source: 2200369-04**			Prepared: 3/16/2022 Analyzed: 3/22/2022				
1,2,4-Trichlorobenzene	5111.52	230	35	7118.12	ND	71.8	35 - 113			
1,2-Dichlorobenzene	4545.63	230	18	7118.12	ND	63.9	32 - 102			
1,3-Dichlorobenzene	4448.11	230	20	7118.12	ND	62.5	32 - 100			
1,4-Dichlorobenzene	4514.31	230	19	7118.12	ND	63.4	33 - 97			
2,4,5-Trichlorophenol	6165.00	230	21	7118.12	ND	86.6	36 - 124			
2,4,6-Trichlorophenol	6041.15	230	25	7118.12	ND	84.9	37 - 130			
2,4-Dichlorophenol	5568.51	1200	24	7118.12	ND	78.2	32 - 130			
2,4-Dimethylphenol	5756.42	230	18	7118.12	ND	80.9	30 - 128			
2,4-Dinitrophenol	5033.94	1200	61	7118.12	ND	70.7	0 - 203			
2,4-Dinitrotoluene	6635.51	230	24	7118.12	ND	93.2	21 - 168			
2,6-Dinitrotoluene	6367.16	230	35	7118.12	ND	89.4	31 - 152			
2-Chloronaphthalene	5694.50	230	20	7118.12	ND	80.0	33 - 130			
2-Chlorophenol	4691.55	230	22	7118.12	ND	65.9	32 - 106			
2-Methylnaphthalene	5511.56	230	19	7118.12	ND	77.4	33 - 125			
2-Methylphenol	5078.07	230	25	7118.12	ND	71.3	34 - 96			
2-Nitroaniline	6436.92	1200	30	7118.12	ND	90.4	30 - 146			
2-Nitrophenol	5446.08	230	32	7118.12	ND	76.5	22 - 125			
3,3´-Dichlorobenzidine	5504.44	470	200	7118.12	ND	77.3	19 - 144			
3-Nitroaniline	6587.82	1200	35	7118.12	ND	92.6	36 - 133			
4,6-Dinitro-2-methyphenol	6538.71	1200	29	7118.12	ND	91.9	0 - 196			
4-Bromophenyl-phenylether	6417.70	230	45	7118.12	ND	90.2	41 - 121			
4-Chloro-3-methylphenol	6305.94	470	51	7118.12	ND	88.6	39 - 134			
4-Chloroaniline	5902.35	470	38	7118.12	ND	82.9	37 - 115			
4-Chlorophenyl-phenylether	6196.32	230	24	7118.12	ND	87.0	34 - 133			
4-Methylphenol	2720.55	230	41	3559.06	ND	76.4	34 - 121			
4-Nitroaniline	6598.50	1200	27	7118.12	ND	92.7	30 - 138			
4-Nitrophenol	6328.01	230	45	7118.12	ND	88.9	5 - 154			
Acenaphthene	5797.00	230	30	7118.12	ND	81.4	33 - 121			
Acenaphthylene	6020.51	230	44	7118.12	ND	84.6	35 - 120			
Anthracene	6528.74	230	36	7118.12	ND	91.7	28 - 133			
Benzidine (M)	4319.99	1200	1000	7118.12	ND	60.7	8 - 175			
Benzo(a)anthracene	6357.19	230	31	7118.12	ND	89.3	32 - 127			
Benzo(a)pyrene	6409.16	230	45	7118.12	ND	90.0	35 - 127			
Benzo(b)fluoranthene	6680.36	230	46	7118.12	ND	93.8	29 - 126			
Benzo(g,h,i)perylene	6395.63	230	58	7118.12	ND	89.8	26 - 129			
Benzo(k)fluoranthene	5899.50	230	23	7118.12	ND	82.9	36 - 120			
Benzoic acid	ND	1200	640	7118.12	ND	NR	0 - 208			
Benzyl alcohol	5438.96	470	23	7118.12	29.8961	76.0	32 - 120			
bis(2-chloroethoxy)methane	5408.35	230	46	7118.12	ND	76.0	34 - 108			
bis(2-Chloroethyl)ether	4743.52	230	47	7118.12	ND	66.6	34 - 100			
bis(2-chloroisopropyl)ether	4630.34	230	54	7118.12	ND	65.0	21 - 111			
bis(2-ethylhexyl)phthalate	6568.60	230	45	7118.12	ND	92.3	39 - 131			
Butylbenzylphthalate	6617.01	230	29	7118.12	ND	93.0	39 - 129			
Chrysene	6417.70	230	60	7118.12	70.4694	89.2	33 - 126			

Certificate of Analysis

GSI Environmental, Inc.	Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800	Report To :	Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612	Reported :	04/14/2022

Semivolatile Organic Compounds by EPA 8270C - Quality Control (cont'd)

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	MDL (ug/kg dry)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B2C1217 - MSSEMI_NAL (continued)										
Matrix Spike (B2C1217-MS1) - Continued			**Source: 2200369-04**			Prepared: 3/16/2022 Analyzed: 3/22/2022				
Di-n-butylphthalate	6669.68	230	36	7118.12	ND	93.7	42 - 122			
Di-n-octylphthalate	6685.34	230	45	7118.12	ND	93.9	30 - 147			
Dibenz(a,h)anthracene	6436.92	230	32	7118.12	ND	90.4	30 - 126			
Dibenzofuran	6000.58	230	41	7118.12	ND	84.3	36 - 133			
Diethyl phthalate	6340.11	230	42	7118.12	ND	89.1	28 - 139			
Dimethyl phthalate	6187.78	230	29	7118.12	ND	86.9	32 - 129			
Fluoranthene	6535.15	230	43	7118.12	ND	91.8	23 - 140			
Fluorene	6204.87	230	76	7118.12	ND	87.2	32 - 130			
Hexachlorobenzene	6488.17	230	39	7118.12	ND	91.2	27 - 148			
Hexachlorobutadiene	4899.40	470	37	7118.12	ND	68.8	29 - 112			
Hexachlorocyclopentadiene	5497.33	470	50	7118.12	ND	77.2	13 - 147			
Hexachloroethane	4557.73	230	67	7118.12	ND	64.0	31 - 104			
Indeno(1,2,3-cd)pyrene	6634.09	230	54	7118.12	ND	93.2	21 - 137			
Isophorone	5764.26	230	60	7118.12	ND	81.0	34 - 112			
N-Nitroso-di-n propylamine	5321.51	230	43	7118.12	ND	74.8	36 - 115			
N-Nitrosodiphenylamine	6395.63	230	23	7118.12	ND	89.8	40 - 120			
Naphthalene	5174.16	230	40	7118.12	ND	72.7	33 - 108			
Nitrobenzene	5100.13	230	40	7118.12	ND	71.6	32 - 122			
Pentachlorophenol	6442.61	1200	35	7118.12	ND	90.5	0 - 151			
Phenanthrene	6515.22	230	47	7118.12	ND	91.5	40 - 122			
Phenol	4417.51	230	24	7118.12	ND	62.1	35 - 112			B
Pyrene	6405.60	230	52	7118.12	ND	90.0	28 - 132			
Pyridine	4737.11	1200	190	7118.12	ND	66.5	5 - 107			
Surrogate: 1,2-Dichlorobenzene-d4	*4526*			*7118.12*		*63.6*	*23 - 102*			
Surrogate: 2,4,6-Tribromophenol	*9580*			*10677.2*		*89.7*	*3 - 138*			
Surrogate: 2-Chlorophenol-d4	*7038*			*10677.2*		*65.9*	*18 - 105*			
Surrogate: 2-Fluorobiphenyl	*5494*			*7118.12*		*77.2*	*34 - 106*			
Surrogate: 2-Fluorophenol	*6593*			*10677.2*		*61.7*	*16 - 94*			
Surrogate: 4-Terphenyl-d14	*6303*			*7118.12*		*88.6*	*31 - 130*			
Surrogate: Nitrobenzene-d5	*5146*			*7118.12*		*72.3*	*23 - 102*			
Surrogate: Phenol-d6	*7147*			*10677.2*		*66.9*	*14 - 104*			
Matrix Spike Dup (B2C1217-MSD1)			**Source: 2200369-04**			Prepared: 3/16/2022 Analyzed: 3/22/2022				
1,2,4-Trichlorobenzene	5184.84	230	35	7118.12	ND	72.8	35 - 113	1.42	20	
1,2-Dichlorobenzene	4816.12	230	18	7118.12	ND	67.7	32 - 102	5.78	20	
1,3-Dichlorobenzene	4641.73	230	20	7118.12	ND	65.2	32 - 100	4.26	20	
1,4-Dichlorobenzene	4855.98	230	19	7118.12	ND	68.2	33 - 97	7.29	20	
2,4,5-Trichlorophenol	6281.03	230	21	7118.12	ND	88.2	36 - 124	1.86	20	
2,4,6-Trichlorophenol	5992.75	230	25	7118.12	ND	84.2	37 - 130	0.804	20	
2,4-Dichlorophenol	5627.59	1200	24	7118.12	ND	79.1	32 - 130	1.06	20	
2,4-Dimethylphenol	5863.91	230	18	7118.12	ND	82.4	30 - 128	1.85	20	
2,4-Dinitrophenol	5119.35	1200	61	7118.12	ND	71.9	0 - 203	1.68	20	
2,4-Dinitrotoluene	6840.52	230	24	7118.12	ND	96.1	21 - 168	3.04	20	
2,6-Dinitrotoluene	6406.31	230	35	7118.12	ND	90.0	31 - 152	0.613	20	

Certificate of Analysis

GSI Environmental, Inc.	Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800	Report To :	Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612	Reported :	04/14/2022

Semivolatile Organic Compounds by EPA 8270C - Quality Control (cont'd)

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	MDL (ug/kg dry)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B2C1217 - MSSEMI_NAL (continued)										
Matrix Spike Dup (B2C1217-MSD1) - Continued			**Source: 2200369-04**			Prepared: 3/16/2022 Analyzed: 3/22/2022				
2-Chloronaphthalene	5709.44	230	20	7118.12	ND	80.2	33 - 130	0.262	20	
2-Chlorophenol	4939.26	230	22	7118.12	ND	69.4	32 - 106	5.14	20	
2-Methylnaphthalene	5560.68	230	19	7118.12	ND	78.1	33 - 125	0.887	20	
2-Methylphenol	5420.45	230	25	7118.12	ND	76.2	34 - 96	6.52	20	
2-Nitroaniline	6594.94	1200	30	7118.12	ND	92.6	30 - 146	2.43	20	
2-Nitrophenol	5463.16	230	32	7118.12	ND	76.7	22 - 125	0.313	20	
3,3´-Dichlorobenzidine	5661.04	470	200	7118.12	ND	79.5	19 - 144	2.81	20	
3-Nitroaniline	6829.13	1200	35	7118.12	ND	95.9	36 - 133	3.60	20	
4,6-Dinitro-2-methyphenol	6582.84	1200	29	7118.12	ND	92.5	0 - 196	0.673	20	
4-Bromophenyl-phenylether	6547.96	230	45	7118.12	ND	92.0	41 - 121	2.01	20	
4-Chloro-3-methylphenol	6300.96	470	51	7118.12	ND	88.5	39 - 134	0.0791	20	
4-Chloroaniline	5997.73	470	38	7118.12	ND	84.3	37 - 115	1.60	20	
4-Chlorophenyl-phenylether	6199.88	230	24	7118.12	ND	87.1	34 - 133	0.0574	20	
4-Methylphenol	2869.32	230	41	3559.06	ND	80.6	34 - 121	5.32	20	
4-Nitroaniline	6822.72	1200	27	7118.12	ND	95.8	30 - 138	3.34	20	
4-Nitrophenol	6629.11	230	45	7118.12	ND	93.1	5 - 154	4.65	20	
Acenaphthene	6030.47	230	30	7118.12	ND	84.7	33 - 121	3.95	20	
Acenaphthylene	6085.28	230	44	7118.12	ND	85.5	35 - 120	1.07	20	
Anthracene	6508.10	230	36	7118.12	ND	91.4	28 - 133	0.317	20	
Benzidine (M)	4196.84	1200	1000	7118.12	ND	59.0	8 - 175	2.89	20	
Benzo(a)anthracene	6476.07	230	31	7118.12	ND	91.0	32 - 127	1.85	20	
Benzo(a)pyrene	6651.88	230	45	7118.12	ND	93.4	35 - 127	3.72	20	
Benzo(b)fluoranthene	6420.55	230	46	7118.12	ND	90.2	29 - 126	3.97	20	
Benzo(g,h,i)perylene	6548.67	230	58	7118.12	ND	92.0	26 - 129	2.36	20	
Benzo(k)fluoranthene	6774.32	230	23	7118.12	ND	95.2	36 - 120	13.8	20	
Benzoic acid	ND	1200	640	7118.12	ND	NR	0 - 208	NR	20	
Benzyl alcohol	5527.93	470	23	7118.12	29.8961	77.2	32 - 120	1.62	20	
bis(2-chloroethoxy)methane	5629.01	230	46	7118.12	ND	79.1	34 - 108	4.00	20	
bis(2-Chloroethyl)ether	4851.00	230	47	7118.12	ND	68.2	34 - 100	2.24	20	
bis(2-chloroisopropyl)ether	4830.36	230	54	7118.12	ND	67.9	21 - 111	4.23	20	
bis(2-ethylhexyl)phthalate	6643.34	230	45	7118.12	ND	93.3	39 - 131	1.13	20	
Butylbenzylphthalate	6713.81	230	29	7118.12	ND	94.3	39 - 129	1.45	20	
Chrysene	6607.04	230	60	7118.12	70.4694	91.8	33 - 126	2.91	20	
Di-n-butylphthalate	6631.95	230	36	7118.12	ND	93.2	42 - 122	0.567	20	
Di-n-octylphthalate	6880.38	230	45	7118.12	ND	96.7	30 - 147	2.88	20	
Dibenz(a,h)anthracene	6670.39	230	32	7118.12	ND	93.7	30 - 126	3.56	20	
Dibenzofuran	6126.57	230	41	7118.12	ND	86.1	36 - 133	2.08	20	
Diethyl phthalate	6545.82	230	42	7118.12	ND	92.0	28 - 139	3.19	20	
Dimethyl phthalate	6286.72	230	29	7118.12	ND	88.3	32 - 129	1.59	20	
Fluoranthene	6708.12	230	43	7118.12	ND	94.2	23 - 140	2.61	20	
Fluorene	6226.93	230	76	7118.12	ND	87.5	32 - 130	0.355	20	
Hexachlorobenzene	6561.48	230	39	7118.12	ND	92.2	27 - 148	1.12	20	
Hexachlorobutadiene	5084.47	470	37	7118.12	ND	71.4	29 - 112	3.71	20	
Hexachlorocyclopentadiene	5347.84	470	50	7118.12	ND	75.1	13 - 147	2.76	20	

Certificate of Analysis

GSI Environmental, Inc.	Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800	Report To :	Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612	Reported :	04/14/2022

Semivolatile Organic Compounds by EPA 8270C - Quality Control (cont'd)

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	MDL (ug/kg dry)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B2C1217 - MSSEMI_NAL (continued)										
Matrix Spike Dup (B2C1217-MSD1) - Continued			**Source: 2200369-04**			Prepared: 3/16/2022 Analyzed: 3/22/2022				
Hexachloroethane	4813.27	230	67	7118.12	ND	67.6	31 - 104	5.45	20	
Indeno(1,2,3-cd)pyrene	6814.18	230	54	7118.12	ND	95.7	21 - 137	2.68	20	
Isophorone	5879.57	230	60	7118.12	ND	82.6	34 - 112	1.98	20	
N-Nitroso-di-n propylamine	5520.82	230	43	7118.12	ND	77.6	36 - 115	3.68	20	
N-Nitrosodiphenylamine	6379.26	230	23	7118.12	ND	89.6	40 - 120	0.256	20	
Naphthalene	5245.34	230	40	7118.12	ND	73.7	33 - 108	1.37	20	
Nitrobenzene	5246.06	230	40	7118.12	ND	73.7	32 - 122	2.82	20	
Pentachlorophenol	6314.49	1200	35	7118.12	ND	88.7	0 - 151	2.01	20	
Phenanthrene	6482.47	230	47	7118.12	ND	91.1	40 - 122	0.504	20	
Phenol	4701.52	230	24	7118.12	ND	66.1	35 - 112	6.23	20	B
Pyrene	6622.70	230	52	7118.12	ND	93.0	28 - 132	3.33	20	
Pyridine	4599.02	1200	190	7118.12	ND	64.6	5 - 107	2.96	20	
Surrogate: 1,2-Dichlorobenzene-d4	*4879*			*7118.12*		*68.5*	*23 - 102*			
Surrogate: 2,4,6-Tribromophenol	*9992*			*10677.2*		*93.6*	*3 - 138*			
Surrogate: 2-Chlorophenol-d4	*7458*			*10677.2*		*69.9*	*18 - 105*			
Surrogate: 2-Fluorobiphenyl	*5606*			*7118.12*		*78.8*	*34 - 106*			
Surrogate: 2-Fluorophenol	*7001*			*10677.2*		*65.6*	*16 - 94*			
Surrogate: 4-Terphenyl-d14	*6468*			*7118.12*		*90.9*	*31 - 130*			
Surrogate: Nitrobenzene-d5	*5252*			*7118.12*		*73.8*	*23 - 102*			
Surrogate: Phenol-d6	*7447*			*10677.2*		*69.7*	*14 - 104*			

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612		Reported :	04/14/2022

Semivolatile Organic Compounds by EPA 8270C - Quality Control

Analyte	Result (ug/kg wet)	PQL (ug/kg wet)	MDL (ug/kg wet)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B2C1217 - MSSEMI_NAL										
Blank (B2C1217-BLK1)							Prepared: 3/16/2022 Analyzed: 3/22/2022			
1,2,4-Trichlorobenzene	ND	220	33							
1,2-Dichlorobenzene	ND	220	17							
1,3-Dichlorobenzene	ND	220	18							
1,4-Dichlorobenzene	ND	220	18							
2,4,5-Trichlorophenol	ND	220	20							
2,4,6-Trichlorophenol	ND	220	23							
2,4-Dichlorophenol	ND	1100	22							
2,4-Dimethylphenol	ND	220	17							
2,4-Dinitrophenol	ND	1100	57							
2,4-Dinitrotoluene	ND	220	22							
2,6-Dinitrotoluene	ND	220	32							
2-Chloronaphthalene	ND	220	19							
2-Chlorophenol	ND	220	20							
2-Methylnaphthalene	ND	220	18							
2-Methylphenol	ND	220	24							
2-Nitroaniline	ND	1100	28							
2-Nitrophenol	ND	220	30							
3,3´-Dichlorobenzidine	ND	440	190							
3-Nitroaniline	ND	1100	33							
4,6-Dinitro-2-methyphenol	ND	1100	28							
4-Bromophenyl-phenylether	ND	220	43							
4-Chloro-3-methylphenol	ND	440	47							
4-Chloroaniline	ND	440	35							
4-Chlorophenyl-phenylether	ND	220	22							
4-Methylphenol	ND	220	38							
4-Nitroaniline	ND	1100	25							
4-Nitrophenol	ND	220	42							
Acenaphthene	ND	220	28							
Acenaphthylene	ND	220	41							
Anthracene	ND	220	34							
Benzidine (M)	ND	1100	950							
Benzo(a)anthracene	ND	220	29							
Benzo(a)pyrene	ND	220	43							
Benzo(b)fluoranthene	ND	220	43							
Benzo(g,h,i)perylene	ND	220	54							
Benzo(k)fluoranthene	ND	220	22							
Benzoic acid	ND	1100	600							
Benzyl alcohol	ND	440	21							
bis(2-chloroethoxy)methane	ND	220	43							
bis(2-Chloroethyl)ether	ND	220	44							
bis(2-chloroisopropyl)ether	ND	220	51							
bis(2-ethylhexyl)phthalate	ND	220	42							
Butylbenzylphthalate	ND	220	28							
Chrysene	ND	220	56							

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612		Reported :	04/14/2022

Semivolatile Organic Compounds by EPA 8270C - Quality Control (cont'd)

Analyte	Result (ug/kg wet)	PQL (ug/kg wet)	MDL (ug/kg wet)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B2C1217 - MSSEMI_NAL (continued)										
Blank (B2C1217-BLK1) - Continued						Prepared: 3/16/2022 Analyzed: 3/22/2022				
Di-n-butylphthalate	ND	220	34							
Di-n-octylphthalate	ND	220	42							
Dibenz(a,h)anthracene	ND	220	30							
Dibenzofuran	ND	220	38							
Diethyl phthalate	ND	220	39							
Dimethyl phthalate	ND	220	27							
Fluoranthene	ND	220	40							
Fluorene	ND	220	71							
Hexachlorobenzene	ND	220	37							
Hexachlorobutadiene	ND	440	35							
Hexachlorocyclopentadiene	ND	440	46							
Hexachloroethane	ND	220	62							
Indeno(1,2,3-cd)pyrene	ND	220	50							
Isophorone	ND	220	56							
N-Nitroso-di-n propylamine	ND	220	40							
N-Nitrosodiphenylamine	ND	220	21							
Naphthalene	ND	220	37							
Nitrobenzene	ND	220	38							
Pentachlorophenol	ND	1100	33							
Phenanthrene	ND	220	44							
Phenol	ND	220	23							
Pyrene	ND	220	48							
Pyridine	ND	1100	180							
Surrogate: 1,2-Dichlorobenzene-d4	*4655*			*6666.67*		*69.8*	*23 - 102*			
Surrogate: 2,4,6-Tribromophenol	*8429*			*10000.0*		*84.3*	*3 - 138*			
Surrogate: 2-Chlorophenol-d4	*6921*			*10000.0*		*69.2*	*18 - 105*			
Surrogate: 2-Fluorobiphenyl	*5081*			*6666.67*		*76.2*	*34 - 106*			
Surrogate: 2-Fluorophenol	*6693*			*10000.0*		*66.9*	*16 - 94*			
Surrogate: 4-Terphenyl-d14	*6326*			*6666.67*		*94.9*	*31 - 130*			
Surrogate: Nitrobenzene-d5	*4647*			*6666.67*		*69.7*	*23 - 102*			
Surrogate: Phenol-d6	*6906*			*10000.0*		*69.1*	*14 - 104*			
Blank (B2C1217-BLK2)						Prepared: 3/16/2022 Analyzed: 3/24/2022				
1,2,4-Trichlorobenzene	ND	220	33							
1,2-Dichlorobenzene	ND	220	17							
1,3-Dichlorobenzene	ND	220	18							
1,4-Dichlorobenzene	ND	220	18							
2,4,5-Trichlorophenol	ND	220	20							
2,4,6-Trichlorophenol	ND	220	23							
2,4-Dichlorophenol	ND	1100	22							
2,4-Dimethylphenol	ND	220	17							
2,4-Dinitrophenol	ND	1100	57							
2,4-Dinitrotoluene	ND	220	22							
2,6-Dinitrotoluene	ND	220	32							

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612		Reported :	04/14/2022

Semivolatile Organic Compounds by EPA 8270C - Quality Control (cont'd)

Analyte	Result (ug/kg wet)	PQL (ug/kg wet)	MDL (ug/kg wet)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B2C1217 - MSSEMI_NAL (continued)										
Blank (B2C1217-BLK2) - Continued							Prepared: 3/16/2022 Analyzed: 3/24/2022			
2-Chloronaphthalene	ND	220	19							
2-Chlorophenol	ND	220	20							
2-Methylnaphthalene	ND	220	18							
2-Methylphenol	ND	220	24							
2-Nitroaniline	ND	1100	28							
2-Nitrophenol	ND	220	30							
3,3´-Dichlorobenzidine	ND	440	190							
3-Nitroaniline	ND	1100	33							
4,6-Dinitro-2-methyphenol	ND	1100	28							
4-Bromophenyl-phenylether	ND	220	43							
4-Chloro-3-methylphenol	ND	440	47							
4-Chloroaniline	ND	440	35							
4-Chlorophenyl-phenylether	ND	220	22							
4-Methylphenol	ND	220	38							
4-Nitroaniline	ND	1100	25							
4-Nitrophenol	ND	220	42							
Acenaphthene	ND	220	28							
Acenaphthylene	ND	220	41							
Anthracene	ND	220	34							
Benzidine (M)	ND	1100	950							
Benzo(a)anthracene	ND	220	29							
Benzo(a)pyrene	ND	220	43							
Benzo(b)fluoranthene	ND	220	43							
Benzo(g,h,i)perylene	ND	220	54							
Benzo(k)fluoranthene	ND	220	22							
Benzoic acid	ND	1100	600							
Benzyl alcohol	ND	440	21							
bis(2-chloroethoxy)methane	ND	220	43							
bis(2-Chloroethyl)ether	ND	220	44							
bis(2-chloroisopropyl)ether	ND	220	51							
bis(2-ethylhexyl)phthalate	ND	220	42							
Butylbenzylphthalate	ND	220	28							
Chrysene	ND	220	56							
Di-n-butylphthalate	ND	220	34							
Di-n-octylphthalate	ND	220	42							
Dibenz(a,h)anthracene	ND	220	30							
Dibenzofuran	ND	220	38							
Diethyl phthalate	ND	220	39							
Dimethyl phthalate	ND	220	27							
Fluoranthene	ND	220	40							
Fluorene	ND	220	71							
Hexachlorobenzene	ND	220	37							
Hexachlorobutadiene	ND	440	35							
Hexachlorocyclopentadiene	ND	440	46							

Certificate of Analysis

GSI Environmental, Inc.	Project Number :	SATI / 6013
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Irvine , CA 92612	Reported :	04/14/2022

Semivolatile Organic Compounds by EPA 8270C - Quality Control (cont'd)

Analyte	Result (ug/kg wet)	PQL (ug/kg wet)	MDL (ug/kg wet)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B2C1217 - MSSEMI_NAL (continued)										
Blank (B2C1217-BLK2) - Continued						Prepared: 3/16/2022 Analyzed: 3/24/2022				
Hexachloroethane	ND	220	62							
Indeno(1,2,3-cd)pyrene	ND	220	50							
Isophorone	ND	220	56							
N-Nitroso-di-n propylamine	ND	220	40							
N-Nitrosodiphenylamine	ND	220	21							
Naphthalene	ND	220	37							
Nitrobenzene	ND	220	38							
Pentachlorophenol	ND	1100	33							
Phenanthrene	ND	220	44							
Phenol	248.000	220	23							B6
Pyrene	ND	220	48							
Pyridine	ND	1100	180							
Surrogate: 1,2-Dichlorobenzene-d4	*4428*			*6666.67*		*66.4*	*23 - 102*			
Surrogate: 2,4,6-Tribromophenol	*8265*			*10000.0*		*82.6*	*3 - 138*			
Surrogate: 2-Chlorophenol-d4	*6614*			*10000.0*		*66.1*	*18 - 105*			
Surrogate: 2-Fluorobiphenyl	*4800*			*6666.67*		*72.0*	*34 - 106*			
Surrogate: 2-Fluorophenol	*6425*			*10000.0*		*64.2*	*16 - 94*			
Surrogate: 4-Terphenyl-d14	*5838*			*6666.67*		*87.6*	*31 - 130*			
Surrogate: Nitrobenzene-d5	*4152*			*6666.67*		*62.3*	*23 - 102*			
Surrogate: Phenol-d6	*6709*			*10000.0*		*67.1*	*14 - 104*			
LCS (B2C1217-BS1)						Prepared: 3/16/2022 Analyzed: 3/22/2022				
1,2,4-Trichlorobenzene	4892.67	220	33	6666.67		73.4	41 - 104			
1,2-Dichlorobenzene	4358.67	220	17	6666.67		65.4	37 - 100			
1,3-Dichlorobenzene	4250.00	220	18	6666.67		63.8	36 - 98			
1,4-Dichlorobenzene	4276.00	220	18	6666.67		64.1	37 - 97			
2,4,5-Trichlorophenol	5848.00	220	20	6666.67		87.7	47 - 115			
2,4,6-Trichlorophenol	5687.33	220	23	6666.67		85.3	48 - 119			
2,4-Dichlorophenol	5286.67	1100	22	6666.67		79.3	46 - 118			
2,4-Dimethylphenol	5593.33	220	17	6666.67		83.9	41 - 114			
2,4-Dinitrophenol	4981.33	1100	57	6666.67		74.7	0 - 180			
2,4-Dinitrotoluene	6392.67	220	22	6666.67		95.9	40 - 138			
2,6-Dinitrotoluene	6320.00	220	32	6666.67		94.8	45 - 131			
2-Chloronaphthalene	5539.33	220	19	6666.67		83.1	46 - 112			
2-Chlorophenol	4527.33	220	20	6666.67		67.9	41 - 99			
2-Methylnaphthalene	5289.33	220	18	6666.67		79.3	45 - 111			
2-Methylphenol	4975.33	220	24	6666.67		74.6	40 - 92			
2-Nitroaniline	6467.33	1100	28	6666.67		97.0	44 - 130			
2-Nitrophenol	5150.67	220	30	6666.67		77.3	34 - 114			
3,3´-Dichlorobenzidine	5566.67	440	190	6666.67		83.5	41 - 128			
3-Nitroaniline	6534.00	1100	33	6666.67		98.0	47 - 123			
4,6-Dinitro-2-methyphenol	6064.67	1100	28	6666.67		91.0	2 - 172			
4-Bromophenyl-phenylether	6206.00	220	43	6666.67		93.1	49 - 116			
4-Chloro-3-methylphenol	6040.00	440	47	6666.67		90.6	45 - 127			

Certificate of Analysis

GSI Environmental, Inc.	Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800	Report To :	Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612	Reported :	04/14/2022

Semivolatile Organic Compounds by EPA 8270C - Quality Control (cont'd)

Analyte	Result (ug/kg wet)	PQL (ug/kg wet)	MDL (ug/kg wet)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B2C1217 - MSSEMI_NAL (continued)										
LCS (B2C1217-BS1) - Continued						Prepared: 3/16/2022 Analyzed: 3/22/2022				
4-Chloroaniline	5704.67	440	35	6666.67		85.6	50 - 106			
4-Chlorophenyl-phenylether	6013.33	220	22	6666.67		90.2	49 - 115			
4-Methylphenol	2624.67	220	38	3333.33		78.7	43 - 109			
4-Nitroaniline	6543.33	1100	25	6666.67		98.1	44 - 125			
4-Nitrophenol	6313.33	220	42	6666.67		94.7	30 - 146			
Acenaphthene	5710.00	220	28	6666.67		85.6	44 - 110			
Acenaphthylene	5811.33	220	41	6666.67		87.2	42 - 111			
Anthracene	6176.67	220	34	6666.67		92.6	41 - 117			
Benzidine (M)	4354.67	1100	950	6666.67		65.3	0 - 189			
Benzo(a)anthracene	6224.00	220	29	6666.67		93.4	45 - 110			
Benzo(a)pyrene	6214.00	220	43	6666.67		93.2	45 - 116			
Benzo(b)fluoranthene	6159.33	220	43	6666.67		92.4	43 - 112			
Benzo(g,h,i)perylene	6148.00	220	54	6666.67		92.2	43 - 113			
Benzo(k)fluoranthene	6242.67	220	22	6666.67		93.6	42 - 114			
Benzoic acid	ND	1100	600	6666.67		NR	0 - 134			
Benzyl alcohol	5142.67	440	21	6666.67		77.1	39 - 117			
bis(2-chloroethoxy)methane	5184.00	220	43	6666.67		77.8	43 - 102			
bis(2-Chloroethyl)ether	4442.67	220	44	6666.67		66.6	38 - 99			
bis(2-chloroisopropyl)ether	4366.67	220	51	6666.67		65.5	30 - 104			
bis(2-ethylhexyl)phthalate	6312.00	220	42	6666.67		94.7	49 - 123			
Butylbenzylphthalate	6425.33	220	28	6666.67		96.4	49 - 122			
Chrysene	6250.67	220	56	6666.67		93.8	46 - 111			
Di-n-butylphthalate	6276.00	220	34	6666.67		94.1	48 - 118			
Di-n-octylphthalate	6424.67	220	42	6666.67		96.4	46 - 131			
Dibenz(a,h)anthracene	6273.33	220	30	6666.67		94.1	43 - 113			
Dibenzofuran	5817.33	220	38	6666.67		87.3	50 - 113			
Diethyl phthalate	6154.00	220	39	6666.67		92.3	50 - 115			
Dimethyl phthalate	6068.67	220	27	6666.67		91.0	48 - 112			
Fluoranthene	6248.67	220	40	6666.67		93.7	40 - 119			
Fluorene	5996.67	220	71	6666.67		89.9	41 - 117			
Hexachlorobenzene	6217.33	220	37	6666.67		93.3	46 - 123			
Hexachlorobutadiene	4414.00	440	35	6666.67		66.2	37 - 104			
Hexachlorocyclopentadiene	4782.00	440	46	6666.67		71.7	30 - 128			
Hexachloroethane	4328.00	220	62	6666.67		64.9	38 - 103			
Indeno(1,2,3-cd)pyrene	6413.33	220	50	6666.67		96.2	43 - 113			
Isophorone	5548.67	220	56	6666.67		83.2	43 - 109			
N-Nitroso-di-n propylamine	5196.67	220	40	6666.67		77.9	44 - 111			
N-Nitrosodiphenylamine	6040.67	220	21	6666.67		90.6	48 - 113			
Naphthalene	4779.33	220	37	6666.67		71.7	38 - 103			
Nitrobenzene	4792.00	220	38	6666.67		71.9	40 - 111			
Pentachlorophenol	5681.33	1100	33	6666.67		85.2	33 - 130			
Phenanthrene	6087.33	220	44	6666.67		91.3	42 - 119			
Phenol	4350.67	220	23	6666.67		65.3	43 - 104			B
Pyrene	6208.00	220	48	6666.67		93.1	38 - 120			

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612		Reported :	04/14/2022

Semivolatile Organic Compounds by EPA 8270C - Quality Control (cont'd)

Analyte	Result (ug/kg wet)	PQL (ug/kg wet)	MDL (ug/kg wet)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B2C1217 - MSSEMI_NAL (continued)										
LCS (B2C1217-BS1) - Continued						Prepared: 3/16/2022 Analyzed: 3/22/2022				
Pyridine	2517.33	1100	180	6666.67		37.8	0 - 72			
Surrogate: 1,2-Dichlorobenzene-d4	*4542*			*6666.67*		*68.1*	*23 - 102*			
Surrogate: 2,4,6-Tribromophenol	*9679*			*10000.0*		*96.8*	*3 - 138*			
Surrogate: 2-Chlorophenol-d4	*6707*			*10000.0*		*67.1*	*18 - 105*			
Surrogate: 2-Fluorobiphenyl	*5365*			*6666.67*		*80.5*	*34 - 106*			
Surrogate: 2-Fluorophenol	*6353*			*10000.0*		*63.5*	*16 - 94*			
Surrogate: 4-Terphenyl-d14	*6261*			*6666.67*		*93.9*	*31 - 130*			
Surrogate: Nitrobenzene-d5	*4810*			*6666.67*		*72.2*	*23 - 102*			
Surrogate: Phenol-d6	*7069*			*10000.0*		*70.7*	*14 - 104*			
LCS (B2C1217-BS2)						Prepared: 3/16/2022 Analyzed: 3/24/2022				
1,2,4-Trichlorobenzene	4923.33	220	33	6666.67		73.8	41 - 104			
1,2-Dichlorobenzene	4371.33	220	17	6666.67		65.6	37 - 100			
1,3-Dichlorobenzene	4278.67	220	18	6666.67		64.2	36 - 98			
1,4-Dichlorobenzene	4408.00	220	18	6666.67		66.1	37 - 97			
2,4,5-Trichlorophenol	5734.67	220	20	6666.67		86.0	47 - 115			
2,4,6-Trichlorophenol	5638.00	220	23	6666.67		84.6	48 - 119			
2,4-Dichlorophenol	5506.67	1100	22	6666.67		82.6	46 - 118			
2,4-Dimethylphenol	5444.00	220	17	6666.67		81.7	41 - 114			
2,4-Dinitrophenol	5144.67	1100	57	6666.67		77.2	0 - 180			
2,4-Dinitrotoluene	6110.67	220	22	6666.67		91.7	40 - 138			
2,6-Dinitrotoluene	5984.67	220	32	6666.67		89.8	45 - 131			
2-Chloronaphthalene	5296.67	220	19	6666.67		79.4	46 - 112			
2-Chlorophenol	4608.67	220	20	6666.67		69.1	41 - 99			
2-Methylnaphthalene	5220.00	220	18	6666.67		78.3	45 - 111			
2-Methylphenol	4961.33	220	24	6666.67		74.4	40 - 92			
2-Nitroaniline	6100.67	1100	28	6666.67		91.5	44 - 130			
2-Nitrophenol	5172.00	220	30	6666.67		77.6	34 - 114			
3,3´-Dichlorobenzidine	5196.67	440	190	6666.67		77.9	41 - 128			
3-Nitroaniline	6249.33	1100	33	6666.67		93.7	47 - 123			
4,6-Dinitro-2-methyphenol	6082.00	1100	28	6666.67		91.2	2 - 172			
4-Bromophenyl-phenylether	6044.00	220	43	6666.67		90.7	49 - 116			
4-Chloro-3-methylphenol	5906.00	440	47	6666.67		88.6	45 - 127			
4-Chloroaniline	5528.00	440	35	6666.67		82.9	50 - 106			
4-Chlorophenyl-phenylether	5702.67	220	22	6666.67		85.5	49 - 115			
4-Methylphenol	2699.33	220	38	3333.33		81.0	43 - 109			
4-Nitroaniline	6242.67	1100	25	6666.67		93.6	44 - 125			
4-Nitrophenol	5904.00	220	42	6666.67		88.6	30 - 146			
Acenaphthene	5498.00	220	28	6666.67		82.5	44 - 110			
Acenaphthylene	5521.33	220	41	6666.67		82.8	42 - 111			
Anthracene	5986.00	220	34	6666.67		89.8	41 - 117			
Benzidine (M)	2328.67	1100	950	6666.67		34.9	0 - 189			
Benzo(a)anthracene	6084.67	220	29	6666.67		91.3	45 - 110			
Benzo(a)pyrene	6100.67	220	43	6666.67		91.5	45 - 116			

Certificate of Analysis

GSI Environmental, Inc.	Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800	Report To :	Timothy Wood/ Vinnie Robino/Josh Voss
Irvine , CA 92612	Reported :	04/14/2022

Semivolatile Organic Compounds by EPA 8270C - Quality Control (cont'd)

Analyte	Result (ug/kg wet)	PQL (ug/kg wet)	MDL (ug/kg wet)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B2C1217 - MSSEMI_NAL (continued)										
LCS (B2C1217-BS2) - Continued						Prepared: 3/16/2022 Analyzed: 3/24/2022				
Benzo(b)fluoranthene	5976.00	220	43	6666.67		89.6	43 - 112			
Benzo(g,h,i)perylene	5934.00	220	54	6666.67		89.0	43 - 113			
Benzo(k)fluoranthene	6110.00	220	22	6666.67		91.6	42 - 114			
Benzoic acid	ND	1100	600	6666.67		NR	0 - 134			
Benzyl alcohol	5238.00	440	21	6666.67		78.6	39 - 117			
bis(2-chloroethoxy)methane	5278.00	220	43	6666.67		79.2	43 - 102			
bis(2-Chloroethyl)ether	4639.33	220	44	6666.67		69.6	38 - 99			
bis(2-chloroisopropyl)ether	4574.67	220	51	6666.67		68.6	30 - 104			
bis(2-ethylhexyl)phthalate	6280.00	220	42	6666.67		94.2	49 - 123			
Butylbenzylphthalate	6396.00	220	28	6666.67		95.9	49 - 122			
Chrysene	6008.00	220	56	6666.67		90.1	46 - 111			
Di-n-butylphthalate	6165.33	220	34	6666.67		92.5	48 - 118			
Di-n-octylphthalate	6486.67	220	42	6666.67		97.3	46 - 131			
Dibenz(a,h)anthracene	5966.00	220	30	6666.67		89.5	43 - 113			
Dibenzofuran	5572.67	220	38	6666.67		83.6	50 - 113			
Diethyl phthalate	5922.00	220	39	6666.67		88.8	50 - 115			
Dimethyl phthalate	5781.33	220	27	6666.67		86.7	48 - 112			
Fluoranthene	6138.00	220	40	6666.67		92.1	40 - 119			
Fluorene	5694.00	220	71	6666.67		85.4	41 - 117			
Hexachlorobenzene	6033.33	220	37	6666.67		90.5	46 - 123			
Hexachlorobutadiene	4716.67	440	35	6666.67		70.8	37 - 104			
Hexachlorocyclopentadiene	4699.33	440	46	6666.67		70.5	30 - 128			
Hexachloroethane	4350.67	220	62	6666.67		65.3	38 - 103			
Indeno(1,2,3-cd)pyrene	6124.67	220	50	6666.67		91.9	43 - 113			
Isophorone	5444.00	220	56	6666.67		81.7	43 - 109			
N-Nitroso-di-n propylamine	5358.67	220	40	6666.67		80.4	44 - 111			
N-Nitrosodiphenylamine	5829.33	220	21	6666.67		87.4	48 - 113			
Naphthalene	4889.33	220	37	6666.67		73.3	38 - 103			
Nitrobenzene	4894.67	220	38	6666.67		73.4	40 - 111			
Pentachlorophenol	6146.67	1100	33	6666.67		92.2	33 - 130			
Phenanthrene	5846.67	220	44	6666.67		87.7	42 - 119			
Phenol	4261.33	220	23	6666.67		63.9	43 - 104			B
Pyrene	6076.67	220	48	6666.67		91.2	38 - 120			
Pyridine	548.000	1100	180	6666.67		8.22	0 - 72			
Surrogate: 1,2-Dichlorobenzene-d4	*4417*			*6666.67*		*66.3*	*23 - 102*			
Surrogate: 2,4,6-Tribromophenol	*9210*			*10000.0*		*92.1*	*3 - 138*			
Surrogate: 2-Chlorophenol-d4	*6887*			*10000.0*		*68.9*	*18 - 105*			
Surrogate: 2-Fluorobiphenyl	*5114*			*6666.67*		*76.7*	*34 - 106*			
Surrogate: 2-Fluorophenol	*6329*			*10000.0*		*63.3*	*16 - 94*			
Surrogate: 4-Terphenyl-d14	*6061*			*6666.67*		*90.9*	*31 - 130*			
Surrogate: Nitrobenzene-d5	*4781*			*6666.67*		*71.7*	*23 - 102*			
Surrogate: Phenol-d6	*7052*			*10000.0*		*70.5*	*14 - 104*			

ADVANCED TECHNOLOGY LABORATORIES

April 13, 2022

Bianca Mintz
GSI Environmental, Inc.
19200 Von Karman Ave., Suite 800
Irvine, CA 92612
Tel: (949) 679-1070
Fax:

ELAP No.: 1838
CSDLAC No.: 10196
ORELAP No.: CA300003

Re: ATL Work Order Number : 2200381
Client Reference : SATI / 6013

Enclosed are the results for sample(s) received on March 15, 2022 by Advanced Technology Laboratories. The sample(s) are tested for the parameters as indicated on the enclosed chain of custody in accordance with applicable laboratory certifications. The laboratory results contained in this report specifically pertains to the sample(s) submitted.

Thank you for the opportunity to serve the needs of your company. If you have any questions, please feel free to contact me or Project.Management@atlglobal.com.

Sincerely,

Victoria Michel

for

Victoria Michel, Project Assistant
Victoria.Michel@atlglobal.com
Authorized to Release on 04/13/22 15:56 on Behalf of

Amy Leung
Laboratory Director

The test results in this report relate exclusively to the samples as received by the laboratory, and meet the requirements of the methodology under which they were reported; any exceptions are noted within the report and/ or case narrative.

The cover letter/ signature page and the case narrative are integral parts of this analytical report; the absence of any portion of the report renders the report invalid. This report shall not be reproduced except in full, and shall have the express written approval of the laboratory, and the original client firm to do so

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The electronic signature on this report is signed by an authorized signatory of Advanced Technology Laboratories, and is intended to be legally binding as the equivalent of a handwritten signature.

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Bianca Mintz
Irvine , CA 92612		Reported :	04/13/2022

SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Sample 23	2200381-01	Soil	3/15/22 7:50	3/15/22 15:25
Sample 24	2200381-02	Soil	3/15/22 7:55	3/15/22 15:25
Sample 25	2200381-03	Soil	3/15/22 9:00	3/15/22 15:25
Sample 26	2200381-04	Soil	3/15/22 10:05	3/15/22 15:25
Sample 27	2200381-05	Soil	3/15/22 10:10	3/15/22 15:25
Sample 28	2200381-06	Soil	3/15/22 10:15	3/15/22 15:25
Sample 29	2200381-07	Soil	3/15/22 10:40	3/15/22 15:25
Sample 30	2200381-08	Soil	3/15/22 11:15	3/15/22 15:25

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Bianca Mintz
Irvine , CA 92612		Reported :	04/13/2022

Notes and Definitions

S4	Surrogate was diluted out.
S11	Surrogate recovery outside laboratory acceptance limit due to spiking error.
R3	RPD value outside acceptance criteria. Calculation is based on raw values. The analytical batch was validated by the Laboratory Control Sample (LCS).
M6	Matrix spike analyte was diluted out.
M2	Matrix spike recovery outside of acceptance limit due to possible matrix interference. The analytical batch was validated by the laboratory control sample.
M1	Matrix spike recovery outside of acceptance limit. The analytical batch was validated by the laboratory control sample.
D10	Sample required dilution due to dark sample
ND	Analyte is not detected at or above the Practical Quantitation Limit (PQL). When client requests quantitation against MDL, analyte is not detected at or above the Method Detection Limit (MDL)
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
NR	Not Reported
RPD	Relative Percent Difference
CA2	CA-ELAP (CDPH)
OR1	OR-NELAP (OSPHL)

Notes:
(1) The reported MDL and PQL are based on prep ratio variation and analytical dilution.
(2) The suffix [2C] of specific analytes signifies that the reported result is taken from the instrument's second column.
(3) Results are wet unless otherwise specified.

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Bianca Mintz
Irvine , CA 92612		Reported :	04/13/2022

Percent Moisture

Analyte: Percent Solids **Analyst: LN**

Laboratory ID	Client Sample ID	Result	Units	PQL	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
2200381-01	Sample 23	**94**	% by Weight	0.10	1	B2C1293	03/21/2022	03/22/22 12:00	
2200381-02	Sample 24	**99**	% by Weight	0.10	1	B2C1293	03/21/2022	03/22/22 12:00	
2200381-03	Sample 25	**97**	% by Weight	0.10	1	B2C1293	03/21/2022	03/22/22 12:00	
2200381-04	Sample 26	**97**	% by Weight	0.10	1	B2C1293	03/21/2022	03/22/22 12:00	
2200381-05	Sample 27	**95**	% by Weight	0.10	1	B2C1293	03/21/2022	03/22/22 12:00	
2200381-06	Sample 28	**73**	% by Weight	0.10	1	B2C1293	03/21/2022	03/22/22 12:00	
2200381-07	Sample 29	**100**	% by Weight	0.10	1	B2C1293	03/21/2022	03/22/22 12:00	
2200381-08	Sample 30	**99**	% by Weight	0.10	1	B2C1293	03/21/2022	03/22/22 12:00	

Hexavalent Chromium by EPA 7196A/3060A

Analyte: Hexavalent Chromium **Analyst: VJ**

Laboratory ID	Client Sample ID	Result	Units	PQL	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
2200381-01	Sample 23	**ND**	mg/kg dry	1.1	1	B2C1285	03/21/2022	03/21/22 18:02	
2200381-02	Sample 24	**ND**	mg/kg dry	1.0	1	B2C1285	03/21/2022	03/21/22 18:02	
2200381-03	Sample 25	**ND**	mg/kg dry	1.0	1	B2C1285	03/21/2022	03/21/22 18:02	
2200381-04	Sample 26	**ND**	mg/kg dry	1.0	1	B2C1285	03/21/2022	03/21/22 18:02	
2200381-05	Sample 27	**ND**	mg/kg dry	5.2	5	B2C1285	03/21/2022	03/21/22 19:33	
2200381-06	Sample 28	**ND**	mg/kg dry	1.4	1	B2C1285	03/21/2022	03/21/22 18:02	
2200381-07	Sample 29	**4.1**	mg/kg dry	1.0	1	B2C1285	03/21/2022	03/21/22 18:02	
2200381-08	Sample 30	**ND**	mg/kg dry	1.0	1	B2C1285	03/21/2022	03/21/22 18:02	

Certificate of Analysis

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19200 Von Karman Ave., Suite 800		Report To :	Bianca Mintz
Irvine , CA 92612		Reported :	04/13/2022

Mercury by AA (Cold Vapor) EPA 7471A

Analyte: Mercury **Analyst: AEG**

Laboratory ID	Client Sample ID	Result	Units	PQL	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
2200381-01	Sample 23	**ND**	mg/kg dry	0.11	1	B2C1238	03/18/2022	03/18/22 13:34	
2200381-02	Sample 24	**ND**	mg/kg dry	0.10	1	B2C1238	03/18/2022	03/18/22 13:51	
2200381-03	Sample 25	**ND**	mg/kg dry	0.10	1	B2C1238	03/18/2022	03/18/22 13:54	
2200381-04	Sample 26	**ND**	mg/kg dry	0.10	1	B2C1238	03/18/2022	03/18/22 13:56	
2200381-05	Sample 27	**ND**	mg/kg dry	0.10	1	B2C1238	03/18/2022	03/18/22 13:59	
2200381-06	Sample 28	**ND**	mg/kg dry	0.14	1	B2C1238	03/18/2022	03/18/22 14:01	
2200381-07	Sample 29	**ND**	mg/kg dry	0.10	1	B2C1238	03/18/2022	03/18/22 14:04	
2200381-08	Sample 30	**0.12**	mg/kg dry	0.10	1	B2C1238	03/18/2022	03/18/22 14:07	

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Bianca Mintz
Irvine , CA 92612		Reported :	04/13/2022

Client Sample ID: Sample 23
Lab ID: 2200381-01

Title 22 Metals by ICP-AES EPA 6010B

Analyst: WT

Analyte	Result (mg/kg dry)	PQL (mg/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	**8.6**	2.1	1	B2C1253	03/18/2022	03/21/22 15:48	
Arsenic	**4.1**	1.1	1	B2C1253	03/18/2022	03/21/22 15:48	
Barium	**280**	1.1	1	B2C1253	03/18/2022	03/21/22 15:48	
Beryllium	ND	1.1	1	B2C1253	03/18/2022	03/21/22 15:48	
Cadmium	**5.3**	1.1	1	B2C1253	03/18/2022	03/21/22 15:48	
Chromium	**110**	1.1	1	B2C1253	03/18/2022	03/21/22 15:48	
Cobalt	**11**	1.1	1	B2C1253	03/18/2022	03/21/22 15:48	
Copper	**150**	2.1	1	B2C1253	03/18/2022	03/21/22 15:48	
Lead	**120**	1.1	1	B2C1253	03/18/2022	03/21/22 15:48	
Molybdenum	**13**	1.1	1	B2C1253	03/18/2022	03/21/22 15:48	
Nickel	**42**	1.1	1	B2C1253	03/18/2022	03/21/22 15:48	
Selenium	**7.6**	1.1	1	B2C1253	03/18/2022	03/21/22 15:48	
Silver	ND	1.1	1	B2C1253	03/18/2022	03/21/22 15:48	
Thallium	ND	1.1	1	B2C1253	03/18/2022	03/21/22 15:48	
Vanadium	**31**	1.1	1	B2C1253	03/18/2022	03/21/22 15:48	
Zinc	**2800**	11	10	B2C1253	03/18/2022	03/22/22 12:26	

Diesel and Oil Range Organics by EPA 8015B

Analyst: JV

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	ND	400	20	B2C1262	03/18/2022	03/19/22 05:24	D10
ORO	**1600**	400	20	B2C1262	03/18/2022	03/19/22 05:24	D10
Surrogate: p-Terphenyl	*72.4 %*	*62 - 141*		B2C1262	03/18/2022	*03/19/22 05:24*	

Polychlorinated Biphenyls by EPA 8082

Analyst: KL

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aroclor 1016	ND	17	1	B2C1240	03/17/2022	03/18/22 17:07	
Aroclor 1221	ND	17	1	B2C1240	03/17/2022	03/18/22 17:07	
Aroclor 1232	ND	17	1	B2C1240	03/17/2022	03/18/22 17:07	
Aroclor 1242	ND	17	1	B2C1240	03/17/2022	03/18/22 17:07	
Aroclor 1248	ND	17	1	B2C1240	03/17/2022	03/18/22 17:07	
Aroclor 1254	ND	17	1	B2C1240	03/17/2022	03/18/22 17:07	
Aroclor 1260	ND	17	1	B2C1240	03/17/2022	03/18/22 17:07	
Surrogate: Decachlorobiphenyl	*16.3 %*	*0 - 87*		B2C1240	03/17/2022	*03/18/22 17:07*	
Surrogate: Tetrachloro-m-xylene	*17.8 %*	*0 - 103*		B2C1240	03/17/2022	*03/18/22 17:07*	

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Bianca Mintz
Irvine , CA 92612		Reported :	04/13/2022

Client Sample ID: Sample 23
Lab ID: 2200381-01

Semivolatile Organic Compounds by EPA 8270C **Analyst: EB**

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,2,4-Trichlorobenzene	ND	35000	100	B2C1254	03/18/2022	03/22/22 18:16	D10
1,2-Dichlorobenzene	ND	35000	100	B2C1254	03/18/2022	03/22/22 18:16	D10
1,3-Dichlorobenzene	ND	35000	100	B2C1254	03/18/2022	03/22/22 18:16	D10
1,4-Dichlorobenzene	ND	35000	100	B2C1254	03/18/2022	03/22/22 18:16	D10
2,4,5-Trichlorophenol	ND	35000	100	B2C1254	03/18/2022	03/22/22 18:16	D10
2,4,6-Trichlorophenol	ND	35000	100	B2C1254	03/18/2022	03/22/22 18:16	D10
2,4-Dichlorophenol	ND	170000	100	B2C1254	03/18/2022	03/22/22 18:16	D10
2,4-Dimethylphenol	ND	35000	100	B2C1254	03/18/2022	03/22/22 18:16	D10
2,4-Dinitrophenol	ND	170000	100	B2C1254	03/18/2022	03/22/22 18:16	D10
2,4-Dinitrotoluene	ND	35000	100	B2C1254	03/18/2022	03/22/22 18:16	D10
2,6-Dinitrotoluene	ND	35000	100	B2C1254	03/18/2022	03/22/22 18:16	D10
2-Chloronaphthalene	ND	35000	100	B2C1254	03/18/2022	03/22/22 18:16	D10
2-Chlorophenol	ND	35000	100	B2C1254	03/18/2022	03/22/22 18:16	D10
2-Methylnaphthalene	ND	35000	100	B2C1254	03/18/2022	03/22/22 18:16	D10
2-Methylphenol	ND	35000	100	B2C1254	03/18/2022	03/22/22 18:16	D10
2-Nitroaniline	ND	170000	100	B2C1254	03/18/2022	03/22/22 18:16	D10
2-Nitrophenol	ND	35000	100	B2C1254	03/18/2022	03/22/22 18:16	D10
3,3´-Dichlorobenzidine	ND	70000	100	B2C1254	03/18/2022	03/22/22 18:16	D10
3-Nitroaniline	ND	170000	100	B2C1254	03/18/2022	03/22/22 18:16	D10
4,6-Dinitro-2-methyphenol	ND	170000	100	B2C1254	03/18/2022	03/22/22 18:16	D10
4-Bromophenyl-phenylether	ND	35000	100	B2C1254	03/18/2022	03/22/22 18:16	D10
4-Chloro-3-methylphenol	ND	70000	100	B2C1254	03/18/2022	03/22/22 18:16	D10
4-Chloroaniline	ND	70000	100	B2C1254	03/18/2022	03/22/22 18:16	D10
4-Chlorophenyl-phenylether	ND	35000	100	B2C1254	03/18/2022	03/22/22 18:16	D10
4-Methylphenol	ND	35000	100	B2C1254	03/18/2022	03/22/22 18:16	D10
4-Nitroaniline	ND	170000	100	B2C1254	03/18/2022	03/22/22 18:16	D10
4-Nitrophenol	ND	35000	100	B2C1254	03/18/2022	03/22/22 18:16	D10
Acenaphthene	ND	35000	100	B2C1254	03/18/2022	03/22/22 18:16	D10
Acenaphthylene	ND	35000	100	B2C1254	03/18/2022	03/22/22 18:16	D10
Anthracene	ND	35000	100	B2C1254	03/18/2022	03/22/22 18:16	D10
Benzidine (M)	ND	170000	100	B2C1254	03/18/2022	03/22/22 18:16	D10
Benzo(a)anthracene	ND	35000	100	B2C1254	03/18/2022	03/22/22 18:16	D10
Benzo(a)pyrene	ND	35000	100	B2C1254	03/18/2022	03/22/22 18:16	D10
Benzo(b)fluoranthene	ND	35000	100	B2C1254	03/18/2022	03/22/22 18:16	D10
Benzo(g,h,i)perylene	ND	35000	100	B2C1254	03/18/2022	03/22/22 18:16	D10
Benzo(k)fluoranthene	ND	35000	100	B2C1254	03/18/2022	03/22/22 18:16	D10
Benzoic acid	ND	170000	100	B2C1254	03/18/2022	03/22/22 18:16	D10
Benzyl alcohol	ND	70000	100	B2C1254	03/18/2022	03/22/22 18:16	D10
bis(2-chloroethoxy)methane	ND	35000	100	B2C1254	03/18/2022	03/22/22 18:16	D10
bis(2-Chloroethyl)ether	ND	35000	100	B2C1254	03/18/2022	03/22/22 18:16	D10

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Bianca Mintz
Irvine , CA 92612		Reported :	04/13/2022

Client Sample ID: Sample 23
Lab ID: 2200381-01

Semivolatile Organic Compounds by EPA 8270C **Analyst: EB**

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
bis(2-chloroisopropyl)ether	ND	35000	100	B2C1254	03/18/2022	03/22/22 18:16	D10
bis(2-ethylhexyl)phthalate	ND	35000	100	B2C1254	03/18/2022	03/22/22 18:16	D10
Butylbenzylphthalate	ND	35000	100	B2C1254	03/18/2022	03/22/22 18:16	D10
Chrysene	ND	35000	100	B2C1254	03/18/2022	03/22/22 18:16	D10
Di-n-butylphthalate	ND	35000	100	B2C1254	03/18/2022	03/22/22 18:16	D10
Di-n-octylphthalate	ND	35000	100	B2C1254	03/18/2022	03/22/22 18:16	D10
Dibenz(a,h)anthracene	ND	35000	100	B2C1254	03/18/2022	03/22/22 18:16	D10
Dibenzofuran	ND	35000	100	B2C1254	03/18/2022	03/22/22 18:16	D10
Diethyl phthalate	ND	35000	100	B2C1254	03/18/2022	03/22/22 18:16	D10
Dimethyl phthalate	ND	35000	100	B2C1254	03/18/2022	03/22/22 18:16	D10
Fluoranthene	ND	35000	100	B2C1254	03/18/2022	03/22/22 18:16	D10
Fluorene	ND	35000	100	B2C1254	03/18/2022	03/22/22 18:16	D10
Hexachlorobenzene	ND	35000	100	B2C1254	03/18/2022	03/22/22 18:16	D10
Hexachlorobutadiene	ND	70000	100	B2C1254	03/18/2022	03/22/22 18:16	D10
Hexachlorocyclopentadiene	ND	70000	100	B2C1254	03/18/2022	03/22/22 18:16	D10
Hexachloroethane	ND	35000	100	B2C1254	03/18/2022	03/22/22 18:16	D10
Indeno(1,2,3-cd)pyrene	ND	35000	100	B2C1254	03/18/2022	03/22/22 18:16	D10
Isophorone	ND	35000	100	B2C1254	03/18/2022	03/22/22 18:16	D10
N-Nitroso-di-n propylamine	ND	35000	100	B2C1254	03/18/2022	03/22/22 18:16	D10
N-Nitrosodiphenylamine	ND	35000	100	B2C1254	03/18/2022	03/22/22 18:16	D10
Naphthalene	ND	35000	100	B2C1254	03/18/2022	03/22/22 18:16	D10
Nitrobenzene	ND	35000	100	B2C1254	03/18/2022	03/22/22 18:16	D10
Pentachlorophenol	ND	170000	100	B2C1254	03/18/2022	03/22/22 18:16	D10
Phenanthrene	ND	35000	100	B2C1254	03/18/2022	03/22/22 18:16	D10
Phenol	ND	35000	100	B2C1254	03/18/2022	03/22/22 18:16	D10
Pyrene	ND	35000	100	B2C1254	03/18/2022	03/22/22 18:16	D10
Pyridine	ND	170000	100	B2C1254	03/18/2022	03/22/22 18:16	D10
Surrogate: 1,2-Dichlorobenzene-d4	*34.0 %*	*23 - 102*		B2C1254	03/18/2022	*03/22/22 18:16*	
Surrogate: 2,4,6-Tribromophenol	*12.0 %*	*3 - 138*		B2C1254	03/18/2022	*03/22/22 18:16*	
Surrogate: 2-Chlorophenol-d4	*22.7 %*	*18 - 105*		B2C1254	03/18/2022	*03/22/22 18:16*	
Surrogate: 2-Fluorobiphenyl	*48.0 %*	*34 - 106*		B2C1254	03/18/2022	*03/22/22 18:16*	
Surrogate: 2-Fluorophenol	*0%*	*16 - 94*		B2C1254	03/18/2022	*03/22/22 18:16*	S4
Surrogate: 4-Terphenyl-d14	*47.0 %*	*31 - 130*		B2C1254	03/18/2022	*03/22/22 18:16*	
Surrogate: Nitrobenzene-d5	*30.0 %*	*23 - 102*		B2C1254	03/18/2022	*03/22/22 18:16*	
Surrogate: Phenol-d6	*10.7 %*	*14 - 104*		B2C1254	03/18/2022	*03/22/22 18:16*	S4

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Bianca Mintz
Irvine , CA 92612		Reported :	04/13/2022

Client Sample ID: Sample 24
Lab ID: 2200381-02

Title 22 Metals by ICP-AES EPA 6010B

Analyst: WT

Analyte	Result (mg/kg dry)	PQL (mg/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	**7.5**	2.0	1	B2C1253	03/18/2022	03/21/22 15:52	
Arsenic	**3.4**	1.0	1	B2C1253	03/18/2022	03/21/22 15:52	
Barium	**180**	1.0	1	B2C1253	03/18/2022	03/21/22 15:52	
Beryllium	ND	1.0	1	B2C1253	03/18/2022	03/21/22 15:52	
Cadmium	**4.0**	1.0	1	B2C1253	03/18/2022	03/21/22 15:52	
Chromium	**77**	1.0	1	B2C1253	03/18/2022	03/21/22 15:52	
Cobalt	**9.0**	1.0	1	B2C1253	03/18/2022	03/21/22 15:52	
Copper	**110**	2.0	1	B2C1253	03/18/2022	03/21/22 15:52	
Lead	**110**	1.0	1	B2C1253	03/18/2022	03/21/22 15:52	
Molybdenum	**6.6**	1.0	1	B2C1253	03/18/2022	03/21/22 15:52	
Nickel	**34**	1.0	1	B2C1253	03/18/2022	03/21/22 15:52	
Selenium	**6.7**	1.0	1	B2C1253	03/18/2022	03/21/22 15:52	
Silver	**2.3**	1.0	1	B2C1253	03/18/2022	03/21/22 15:52	
Thallium	ND	1.0	1	B2C1253	03/18/2022	03/21/22 15:52	
Vanadium	**25**	1.0	1	B2C1253	03/18/2022	03/21/22 15:52	
Zinc	**2100**	1.0	1	B2C1253	03/18/2022	03/21/22 15:52	

Diesel and Oil Range Organics by EPA 8015B

Analyst: JV

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	ND	400	20	B2C1262	03/18/2022	03/19/22 05:43	D10
ORO	**1200**	400	20	B2C1262	03/18/2022	03/19/22 05:43	D10
Surrogate: p-Terphenyl	*60.2 %*	*62 - 141*		B2C1262	03/18/2022	*03/19/22 05:43*	S4

Polychlorinated Biphenyls by EPA 8082

Analyst: KL

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aroclor 1016	ND	16	1	B2C1240	03/17/2022	03/18/22 17:26	
Aroclor 1221	ND	16	1	B2C1240	03/17/2022	03/18/22 17:26	
Aroclor 1232	ND	16	1	B2C1240	03/17/2022	03/18/22 17:26	
Aroclor 1242	ND	16	1	B2C1240	03/17/2022	03/18/22 17:26	
Aroclor 1248	ND	16	1	B2C1240	03/17/2022	03/18/22 17:26	
Aroclor 1254	ND	16	1	B2C1240	03/17/2022	03/18/22 17:26	
Aroclor 1260	ND	16	1	B2C1240	03/17/2022	03/18/22 17:26	
Surrogate: Decachlorobiphenyl	*36.4 %*	*0 - 87*		B2C1240	03/17/2022	*03/18/22 17:26*	
Surrogate: Tetrachloro-m-xylene	*37.6 %*	*0 - 103*		B2C1240	03/17/2022	*03/18/22 17:26*	

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Bianca Mintz
Irvine , CA 92612		Reported :	04/13/2022

Client Sample ID: Sample 24
Lab ID: 2200381-02

Semivolatile Organic Compounds by EPA 8270C **Analyst: EB**

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,2,4-Trichlorobenzene	ND	33000	100	B2C1254	03/18/2022	03/22/22 18:42	D10
1,2-Dichlorobenzene	ND	33000	100	B2C1254	03/18/2022	03/22/22 18:42	D10
1,3-Dichlorobenzene	ND	33000	100	B2C1254	03/18/2022	03/22/22 18:42	D10
1,4-Dichlorobenzene	ND	33000	100	B2C1254	03/18/2022	03/22/22 18:42	D10
2,4,5-Trichlorophenol	ND	33000	100	B2C1254	03/18/2022	03/22/22 18:42	D10
2,4,6-Trichlorophenol	ND	33000	100	B2C1254	03/18/2022	03/22/22 18:42	D10
2,4-Dichlorophenol	ND	170000	100	B2C1254	03/18/2022	03/22/22 18:42	D10
2,4-Dimethylphenol	ND	33000	100	B2C1254	03/18/2022	03/22/22 18:42	D10
2,4-Dinitrophenol	ND	170000	100	B2C1254	03/18/2022	03/22/22 18:42	D10
2,4-Dinitrotoluene	ND	33000	100	B2C1254	03/18/2022	03/22/22 18:42	D10
2,6-Dinitrotoluene	ND	33000	100	B2C1254	03/18/2022	03/22/22 18:42	D10
2-Chloronaphthalene	ND	33000	100	B2C1254	03/18/2022	03/22/22 18:42	D10
2-Chlorophenol	ND	33000	100	B2C1254	03/18/2022	03/22/22 18:42	D10
2-Methylnaphthalene	ND	33000	100	B2C1254	03/18/2022	03/22/22 18:42	D10
2-Methylphenol	ND	33000	100	B2C1254	03/18/2022	03/22/22 18:42	D10
2-Nitroaniline	ND	170000	100	B2C1254	03/18/2022	03/22/22 18:42	D10
2-Nitrophenol	ND	33000	100	B2C1254	03/18/2022	03/22/22 18:42	D10
3,3´-Dichlorobenzidine	ND	67000	100	B2C1254	03/18/2022	03/22/22 18:42	D10
3-Nitroaniline	ND	170000	100	B2C1254	03/18/2022	03/22/22 18:42	D10
4,6-Dinitro-2-methyphenol	ND	170000	100	B2C1254	03/18/2022	03/22/22 18:42	D10
4-Bromophenyl-phenylether	ND	33000	100	B2C1254	03/18/2022	03/22/22 18:42	D10
4-Chloro-3-methylphenol	ND	67000	100	B2C1254	03/18/2022	03/22/22 18:42	D10
4-Chloroaniline	ND	67000	100	B2C1254	03/18/2022	03/22/22 18:42	D10
4-Chlorophenyl-phenylether	ND	33000	100	B2C1254	03/18/2022	03/22/22 18:42	D10
4-Methylphenol	ND	33000	100	B2C1254	03/18/2022	03/22/22 18:42	D10
4-Nitroaniline	ND	170000	100	B2C1254	03/18/2022	03/22/22 18:42	D10
4-Nitrophenol	ND	33000	100	B2C1254	03/18/2022	03/22/22 18:42	D10
Acenaphthene	ND	33000	100	B2C1254	03/18/2022	03/22/22 18:42	D10
Acenaphthylene	ND	33000	100	B2C1254	03/18/2022	03/22/22 18:42	D10
Anthracene	ND	33000	100	B2C1254	03/18/2022	03/22/22 18:42	D10
Benzidine (M)	ND	170000	100	B2C1254	03/18/2022	03/22/22 18:42	D10
Benzo(a)anthracene	ND	33000	100	B2C1254	03/18/2022	03/22/22 18:42	D10
Benzo(a)pyrene	ND	33000	100	B2C1254	03/18/2022	03/22/22 18:42	D10
Benzo(b)fluoranthene	ND	33000	100	B2C1254	03/18/2022	03/22/22 18:42	D10
Benzo(g,h,i)perylene	ND	33000	100	B2C1254	03/18/2022	03/22/22 18:42	D10
Benzo(k)fluoranthene	ND	33000	100	B2C1254	03/18/2022	03/22/22 18:42	D10
Benzoic acid	ND	170000	100	B2C1254	03/18/2022	03/22/22 18:42	D10
Benzyl alcohol	ND	67000	100	B2C1254	03/18/2022	03/22/22 18:42	D10
bis(2-chloroethoxy)methane	ND	33000	100	B2C1254	03/18/2022	03/22/22 18:42	D10
bis(2-Chloroethyl)ether	ND	33000	100	B2C1254	03/18/2022	03/22/22 18:42	D10

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19200 Von Karman Ave., Suite 800		Report To :	Bianca Mintz
Irvine , CA 92612		Reported :	04/13/2022

Client Sample ID: Sample 24
Lab ID: 2200381-02

Semivolatile Organic Compounds by EPA 8270C **Analyst: EB**

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
bis(2-chloroisopropyl)ether	ND	33000	100	B2C1254	03/18/2022	03/22/22 18:42	D10
bis(2-ethylhexyl)phthalate	ND	33000	100	B2C1254	03/18/2022	03/22/22 18:42	D10
Butylbenzylphthalate	ND	33000	100	B2C1254	03/18/2022	03/22/22 18:42	D10
Chrysene	ND	33000	100	B2C1254	03/18/2022	03/22/22 18:42	D10
Di-n-butylphthalate	ND	33000	100	B2C1254	03/18/2022	03/22/22 18:42	D10
Di-n-octylphthalate	ND	33000	100	B2C1254	03/18/2022	03/22/22 18:42	D10
Dibenz(a,h)anthracene	ND	33000	100	B2C1254	03/18/2022	03/22/22 18:42	D10
Dibenzofuran	ND	33000	100	B2C1254	03/18/2022	03/22/22 18:42	D10
Diethyl phthalate	ND	33000	100	B2C1254	03/18/2022	03/22/22 18:42	D10
Dimethyl phthalate	ND	33000	100	B2C1254	03/18/2022	03/22/22 18:42	D10
Fluoranthene	ND	33000	100	B2C1254	03/18/2022	03/22/22 18:42	D10
Fluorene	ND	33000	100	B2C1254	03/18/2022	03/22/22 18:42	D10
Hexachlorobenzene	ND	33000	100	B2C1254	03/18/2022	03/22/22 18:42	D10
Hexachlorobutadiene	ND	67000	100	B2C1254	03/18/2022	03/22/22 18:42	D10
Hexachlorocyclopentadiene	ND	67000	100	B2C1254	03/18/2022	03/22/22 18:42	D10
Hexachloroethane	ND	33000	100	B2C1254	03/18/2022	03/22/22 18:42	D10
Indeno(1,2,3-cd)pyrene	ND	33000	100	B2C1254	03/18/2022	03/22/22 18:42	D10
Isophorone	ND	33000	100	B2C1254	03/18/2022	03/22/22 18:42	D10
N-Nitroso-di-n propylamine	ND	33000	100	B2C1254	03/18/2022	03/22/22 18:42	D10
N-Nitrosodiphenylamine	ND	33000	100	B2C1254	03/18/2022	03/22/22 18:42	D10
Naphthalene	ND	33000	100	B2C1254	03/18/2022	03/22/22 18:42	D10
Nitrobenzene	ND	33000	100	B2C1254	03/18/2022	03/22/22 18:42	D10
Pentachlorophenol	ND	170000	100	B2C1254	03/18/2022	03/22/22 18:42	D10
Phenanthrene	ND	33000	100	B2C1254	03/18/2022	03/22/22 18:42	D10
Phenol	ND	33000	100	B2C1254	03/18/2022	03/22/22 18:42	D10
Pyrene	ND	33000	100	B2C1254	03/18/2022	03/22/22 18:42	D10
Pyridine	ND	170000	100	B2C1254	03/18/2022	03/22/22 18:42	D10
Surrogate: 1,2-Dichlorobenzene-d4	*35.0 %*	*23 - 102*		B2C1254	03/18/2022	*03/22/22 18:42*	
Surrogate: 2,4,6-Tribromophenol	*12.0 %*	*3 - 138*		B2C1254	03/18/2022	*03/22/22 18:42*	
Surrogate: 2-Chlorophenol-d4	*24.0 %*	*18 - 105*		B2C1254	03/18/2022	*03/22/22 18:42*	
Surrogate: 2-Fluorobiphenyl	*54.0 %*	*34 - 106*		B2C1254	03/18/2022	*03/22/22 18:42*	
Surrogate: 2-Fluorophenol	*6.00 %*	*16 - 94*		B2C1254	03/18/2022	*03/22/22 18:42*	S4
Surrogate: 4-Terphenyl-d14	*53.0 %*	*31 - 130*		B2C1254	03/18/2022	*03/22/22 18:42*	
Surrogate: Nitrobenzene-d5	*42.0 %*	*23 - 102*		B2C1254	03/18/2022	*03/22/22 18:42*	
Surrogate: Phenol-d6	*22.0 %*	*14 - 104*		B2C1254	03/18/2022	*03/22/22 18:42*	

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19200 Von Karman Ave., Suite 800		Report To :	Bianca Mintz
Irvine , CA 92612		Reported :	04/13/2022

Client Sample ID: Sample 25
Lab ID: 2200381-03

Title 22 Metals by ICP-AES EPA 6010B

Analyst: WT

Analyte	Result (mg/kg dry)	PQL (mg/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	**5.5**	2.1	1	B2C1253	03/18/2022	03/21/22 15:54	
Arsenic	**4.0**	1.0	1	B2C1253	03/18/2022	03/21/22 15:54	
Barium	**140**	1.0	1	B2C1253	03/18/2022	03/21/22 15:54	
Beryllium	ND	1.0	1	B2C1253	03/18/2022	03/21/22 15:54	
Cadmium	**3.2**	1.0	1	B2C1253	03/18/2022	03/21/22 15:54	
Chromium	**85**	1.0	1	B2C1253	03/18/2022	03/21/22 15:54	
Cobalt	**6.6**	1.0	1	B2C1253	03/18/2022	03/21/22 15:54	
Copper	**150**	2.1	1	B2C1253	03/18/2022	03/21/22 15:54	
Lead	**97**	1.0	1	B2C1253	03/18/2022	03/21/22 15:54	
Molybdenum	**7.7**	1.0	1	B2C1253	03/18/2022	03/21/22 15:54	
Nickel	**38**	1.0	1	B2C1253	03/18/2022	03/21/22 15:54	
Selenium	**5.3**	1.0	1	B2C1253	03/18/2022	03/21/22 15:54	
Silver	ND	1.0	1	B2C1253	03/18/2022	03/21/22 15:54	
Thallium	ND	1.0	1	B2C1253	03/18/2022	03/21/22 15:54	
Vanadium	**26**	1.0	1	B2C1253	03/18/2022	03/21/22 15:54	
Zinc	**2000**	1.0	1	B2C1253	03/18/2022	03/21/22 15:54	

Diesel and Oil Range Organics by EPA 8015B

Analyst: JV

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	ND	400	20	B2C1262	03/18/2022	03/19/22 06:01	D10
ORO	**1100**	400	20	B2C1262	03/18/2022	03/19/22 06:01	D10
Surrogate: p-Terphenyl	*60.2 %*	*62 - 141*		B2C1262	03/18/2022	*03/19/22 06:01*	S4

Polychlorinated Biphenyls by EPA 8082

Analyst: KL

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aroclor 1016	ND	16	1	B2C1240	03/17/2022	03/18/22 17:44	
Aroclor 1221	ND	16	1	B2C1240	03/17/2022	03/18/22 17:44	
Aroclor 1232	ND	16	1	B2C1240	03/17/2022	03/18/22 17:44	
Aroclor 1242	ND	16	1	B2C1240	03/17/2022	03/18/22 17:44	
Aroclor 1248	ND	16	1	B2C1240	03/17/2022	03/18/22 17:44	
Aroclor 1254	ND	16	1	B2C1240	03/17/2022	03/18/22 17:44	
Aroclor 1260	ND	16	1	B2C1240	03/17/2022	03/18/22 17:44	
Surrogate: Decachlorobiphenyl	*34.7 %*	*0 - 87*		B2C1240	03/17/2022	*03/18/22 17:44*	
Surrogate: Tetrachloro-m-xylene	*38.9 %*	*0 - 103*		B2C1240	03/17/2022	*03/18/22 17:44*	

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19200 Von Karman Ave., Suite 800		Report To :	Bianca Mintz
Irvine , CA 92612		Reported :	04/13/2022

Client Sample ID: Sample 25
Lab ID: 2200381-03

Semivolatile Organic Compounds by EPA 8270C **Analyst: EB**

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,2,4-Trichlorobenzene	ND	34000	100	B2C1254	03/18/2022	03/22/22 19:08	D10
1,2-Dichlorobenzene	ND	34000	100	B2C1254	03/18/2022	03/22/22 19:08	D10
1,3-Dichlorobenzene	ND	34000	100	B2C1254	03/18/2022	03/22/22 19:08	D10
1,4-Dichlorobenzene	ND	34000	100	B2C1254	03/18/2022	03/22/22 19:08	D10
2,4,5-Trichlorophenol	ND	34000	100	B2C1254	03/18/2022	03/22/22 19:08	D10
2,4,6-Trichlorophenol	ND	34000	100	B2C1254	03/18/2022	03/22/22 19:08	D10
2,4-Dichlorophenol	ND	170000	100	B2C1254	03/18/2022	03/22/22 19:08	D10
2,4-Dimethylphenol	ND	34000	100	B2C1254	03/18/2022	03/22/22 19:08	D10
2,4-Dinitrophenol	ND	170000	100	B2C1254	03/18/2022	03/22/22 19:08	D10
2,4-Dinitrotoluene	ND	34000	100	B2C1254	03/18/2022	03/22/22 19:08	D10
2,6-Dinitrotoluene	ND	34000	100	B2C1254	03/18/2022	03/22/22 19:08	D10
2-Chloronaphthalene	ND	34000	100	B2C1254	03/18/2022	03/22/22 19:08	D10
2-Chlorophenol	ND	34000	100	B2C1254	03/18/2022	03/22/22 19:08	D10
2-Methylnaphthalene	ND	34000	100	B2C1254	03/18/2022	03/22/22 19:08	D10
2-Methylphenol	ND	34000	100	B2C1254	03/18/2022	03/22/22 19:08	D10
2-Nitroaniline	ND	170000	100	B2C1254	03/18/2022	03/22/22 19:08	D10
2-Nitrophenol	ND	34000	100	B2C1254	03/18/2022	03/22/22 19:08	D10
3,3´-Dichlorobenzidine	ND	68000	100	B2C1254	03/18/2022	03/22/22 19:08	D10
3-Nitroaniline	ND	170000	100	B2C1254	03/18/2022	03/22/22 19:08	D10
4,6-Dinitro-2-methyphenol	ND	170000	100	B2C1254	03/18/2022	03/22/22 19:08	D10
4-Bromophenyl-phenylether	ND	34000	100	B2C1254	03/18/2022	03/22/22 19:08	D10
4-Chloro-3-methylphenol	ND	68000	100	B2C1254	03/18/2022	03/22/22 19:08	D10
4-Chloroaniline	ND	68000	100	B2C1254	03/18/2022	03/22/22 19:08	D10
4-Chlorophenyl-phenylether	ND	34000	100	B2C1254	03/18/2022	03/22/22 19:08	D10
4-Methylphenol	ND	34000	100	B2C1254	03/18/2022	03/22/22 19:08	D10
4-Nitroaniline	ND	170000	100	B2C1254	03/18/2022	03/22/22 19:08	D10
4-Nitrophenol	ND	34000	100	B2C1254	03/18/2022	03/22/22 19:08	D10
Acenaphthene	ND	34000	100	B2C1254	03/18/2022	03/22/22 19:08	D10
Acenaphthylene	ND	34000	100	B2C1254	03/18/2022	03/22/22 19:08	D10
Anthracene	ND	34000	100	B2C1254	03/18/2022	03/22/22 19:08	D10
Benzidine (M)	ND	170000	100	B2C1254	03/18/2022	03/22/22 19:08	D10
Benzo(a)anthracene	ND	34000	100	B2C1254	03/18/2022	03/22/22 19:08	D10
Benzo(a)pyrene	ND	34000	100	B2C1254	03/18/2022	03/22/22 19:08	D10
Benzo(b)fluoranthene	ND	34000	100	B2C1254	03/18/2022	03/22/22 19:08	D10
Benzo(g,h,i)perylene	ND	34000	100	B2C1254	03/18/2022	03/22/22 19:08	D10
Benzo(k)fluoranthene	ND	34000	100	B2C1254	03/18/2022	03/22/22 19:08	D10
Benzoic acid	ND	170000	100	B2C1254	03/18/2022	03/22/22 19:08	D10
Benzyl alcohol	ND	68000	100	B2C1254	03/18/2022	03/22/22 19:08	D10
bis(2-chloroethoxy)methane	ND	34000	100	B2C1254	03/18/2022	03/22/22 19:08	D10
bis(2-Chloroethyl)ether	ND	34000	100	B2C1254	03/18/2022	03/22/22 19:08	D10

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Irvine , CA 92612		Reported :	04/13/2022

Client Sample ID: Sample 25
Lab ID: 2200381-03

Semivolatile Organic Compounds by EPA 8270C **Analyst: EB**

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
bis(2-chloroisopropyl)ether	ND	34000	100	B2C1254	03/18/2022	03/22/22 19:08	D10
bis(2-ethylhexyl)phthalate	ND	34000	100	B2C1254	03/18/2022	03/22/22 19:08	D10
Butylbenzylphthalate	ND	34000	100	B2C1254	03/18/2022	03/22/22 19:08	D10
Chrysene	ND	34000	100	B2C1254	03/18/2022	03/22/22 19:08	D10
Di-n-butylphthalate	ND	34000	100	B2C1254	03/18/2022	03/22/22 19:08	D10
Di-n-octylphthalate	ND	34000	100	B2C1254	03/18/2022	03/22/22 19:08	D10
Dibenz(a,h)anthracene	ND	34000	100	B2C1254	03/18/2022	03/22/22 19:08	D10
Dibenzofuran	ND	34000	100	B2C1254	03/18/2022	03/22/22 19:08	D10
Diethyl phthalate	ND	34000	100	B2C1254	03/18/2022	03/22/22 19:08	D10
Dimethyl phthalate	ND	34000	100	B2C1254	03/18/2022	03/22/22 19:08	D10
Fluoranthene	ND	34000	100	B2C1254	03/18/2022	03/22/22 19:08	D10
Fluorene	ND	34000	100	B2C1254	03/18/2022	03/22/22 19:08	D10
Hexachlorobenzene	ND	34000	100	B2C1254	03/18/2022	03/22/22 19:08	D10
Hexachlorobutadiene	ND	68000	100	B2C1254	03/18/2022	03/22/22 19:08	D10
Hexachlorocyclopentadiene	ND	68000	100	B2C1254	03/18/2022	03/22/22 19:08	D10
Hexachloroethane	ND	34000	100	B2C1254	03/18/2022	03/22/22 19:08	D10
Indeno(1,2,3-cd)pyrene	ND	34000	100	B2C1254	03/18/2022	03/22/22 19:08	D10
Isophorone	ND	34000	100	B2C1254	03/18/2022	03/22/22 19:08	D10
N-Nitroso-di-n propylamine	ND	34000	100	B2C1254	03/18/2022	03/22/22 19:08	D10
N-Nitrosodiphenylamine	ND	34000	100	B2C1254	03/18/2022	03/22/22 19:08	D10
Naphthalene	ND	34000	100	B2C1254	03/18/2022	03/22/22 19:08	D10
Nitrobenzene	ND	34000	100	B2C1254	03/18/2022	03/22/22 19:08	D10
Pentachlorophenol	ND	170000	100	B2C1254	03/18/2022	03/22/22 19:08	D10
Phenanthrene	ND	34000	100	B2C1254	03/18/2022	03/22/22 19:08	D10
Phenol	ND	34000	100	B2C1254	03/18/2022	03/22/22 19:08	D10
Pyrene	ND	34000	100	B2C1254	03/18/2022	03/22/22 19:08	D10
Pyridine	ND	170000	100	B2C1254	03/18/2022	03/22/22 19:08	D10
Surrogate: 1,2-Dichlorobenzene-d4	*50.0 %*	*23 - 102*		B2C1254	03/18/2022	*03/22/22 19:08*	
Surrogate: 2,4,6-Tribromophenol	*12.7 %*	*3 - 138*		B2C1254	03/18/2022	*03/22/22 19:08*	
Surrogate: 2-Chlorophenol-d4	*27.3 %*	*18 - 105*		B2C1254	03/18/2022	*03/22/22 19:08*	
Surrogate: 2-Fluorobiphenyl	*61.0 %*	*34 - 106*		B2C1254	03/18/2022	*03/22/22 19:08*	
Surrogate: 2-Fluorophenol	*0%*	*16 - 94*		B2C1254	03/18/2022	*03/22/22 19:08*	S4
Surrogate: 4-Terphenyl-d14	*64.0 %*	*31 - 130*		B2C1254	03/18/2022	*03/22/22 19:08*	
Surrogate: Nitrobenzene-d5	*28.0 %*	*23 - 102*		B2C1254	03/18/2022	*03/22/22 19:08*	
Surrogate: Phenol-d6	*22.0 %*	*14 - 104*		B2C1254	03/18/2022	*03/22/22 19:08*	

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Bianca Mintz
Irvine , CA 92612		Reported :	04/13/2022

Client Sample ID: Sample 26
Lab ID: 2200381-04

Title 22 Metals by ICP-AES EPA 6010B

Analyst: WT

Analyte	Result (mg/kg dry)	PQL (mg/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	**8.5**	2.1	1	B2C1253	03/18/2022	03/21/22 15:55	
Arsenic	**4.8**	1.0	1	B2C1253	03/18/2022	03/21/22 15:55	
Barium	**250**	1.0	1	B2C1253	03/18/2022	03/21/22 15:55	
Beryllium	**1.1**	1.0	1	B2C1253	03/18/2022	03/21/22 15:55	
Cadmium	**5.4**	1.0	1	B2C1253	03/18/2022	03/21/22 15:55	
Chromium	**150**	1.0	1	B2C1253	03/18/2022	03/21/22 15:55	
Cobalt	**11**	1.0	1	B2C1253	03/18/2022	03/21/22 15:55	
Copper	**160**	2.1	1	B2C1253	03/18/2022	03/21/22 15:55	
Lead	**300**	1.0	1	B2C1253	03/18/2022	03/21/22 15:55	
Molybdenum	**15**	1.0	1	B2C1253	03/18/2022	03/21/22 15:55	
Nickel	**140**	1.0	1	B2C1253	03/18/2022	03/21/22 15:55	
Selenium	**7.6**	1.0	1	B2C1253	03/18/2022	03/21/22 15:55	
Silver	ND	1.0	1	B2C1253	03/18/2022	03/21/22 15:55	
Thallium	ND	1.0	1	B2C1253	03/18/2022	03/21/22 15:55	
Vanadium	**41**	1.0	1	B2C1253	03/18/2022	03/21/22 15:55	
Zinc	**4500**	10	10	B2C1253	03/18/2022	03/22/22 12:31	

Diesel and Oil Range Organics by EPA 8015B

Analyst: JV

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	ND	400	20	B2C1262	03/18/2022	03/19/22 06:20	D10
ORO	**2400**	400	20	B2C1262	03/18/2022	03/19/22 06:20	D10
Surrogate: p-Terphenyl	*64.4 %*	*62 - 141*		B2C1262	03/18/2022	*03/19/22 06:20*	

Polychlorinated Biphenyls by EPA 8082

Analyst: KL

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aroclor 1016	ND	17	1	B2C1240	03/17/2022	03/18/22 18:04	
Aroclor 1221	ND	17	1	B2C1240	03/17/2022	03/18/22 18:04	
Aroclor 1232	ND	17	1	B2C1240	03/17/2022	03/18/22 18:04	
Aroclor 1242	ND	17	1	B2C1240	03/17/2022	03/18/22 18:04	
Aroclor 1248	ND	17	1	B2C1240	03/17/2022	03/18/22 18:04	
Aroclor 1254	ND	17	1	B2C1240	03/17/2022	03/18/22 18:04	
Aroclor 1260	ND	17	1	B2C1240	03/17/2022	03/18/22 18:04	
Surrogate: Decachlorobiphenyl	*24.9 %*	*0 - 87*		B2C1240	03/17/2022	*03/18/22 18:04*	
Surrogate: Tetrachloro-m-xylene	*25.7 %*	*0 - 103*		B2C1240	03/17/2022	*03/18/22 18:04*	

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Bianca Mintz
Irvine , CA 92612		Reported :	04/13/2022

Client Sample ID: Sample 26
Lab ID: 2200381-04

Semivolatile Organic Compounds by EPA 8270C **Analyst: EB**

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,2,4-Trichlorobenzene	ND	34000	100	B2C1254	03/18/2022	03/22/22 19:34	D10
1,2-Dichlorobenzene	ND	34000	100	B2C1254	03/18/2022	03/22/22 19:34	D10
1,3-Dichlorobenzene	ND	34000	100	B2C1254	03/18/2022	03/22/22 19:34	D10
1,4-Dichlorobenzene	ND	34000	100	B2C1254	03/18/2022	03/22/22 19:34	D10
2,4,5-Trichlorophenol	ND	34000	100	B2C1254	03/18/2022	03/22/22 19:34	D10
2,4,6-Trichlorophenol	ND	34000	100	B2C1254	03/18/2022	03/22/22 19:34	D10
2,4-Dichlorophenol	ND	170000	100	B2C1254	03/18/2022	03/22/22 19:34	D10
2,4-Dimethylphenol	ND	34000	100	B2C1254	03/18/2022	03/22/22 19:34	D10
2,4-Dinitrophenol	ND	170000	100	B2C1254	03/18/2022	03/22/22 19:34	D10
2,4-Dinitrotoluene	ND	34000	100	B2C1254	03/18/2022	03/22/22 19:34	D10
2,6-Dinitrotoluene	ND	34000	100	B2C1254	03/18/2022	03/22/22 19:34	D10
2-Chloronaphthalene	ND	34000	100	B2C1254	03/18/2022	03/22/22 19:34	D10
2-Chlorophenol	ND	34000	100	B2C1254	03/18/2022	03/22/22 19:34	D10
2-Methylnaphthalene	ND	34000	100	B2C1254	03/18/2022	03/22/22 19:34	D10
2-Methylphenol	ND	34000	100	B2C1254	03/18/2022	03/22/22 19:34	D10
2-Nitroaniline	ND	170000	100	B2C1254	03/18/2022	03/22/22 19:34	D10
2-Nitrophenol	ND	34000	100	B2C1254	03/18/2022	03/22/22 19:34	D10
3,3´-Dichlorobenzidine	ND	68000	100	B2C1254	03/18/2022	03/22/22 19:34	D10
3-Nitroaniline	ND	170000	100	B2C1254	03/18/2022	03/22/22 19:34	D10
4,6-Dinitro-2-methyphenol	ND	170000	100	B2C1254	03/18/2022	03/22/22 19:34	D10
4-Bromophenyl-phenylether	ND	34000	100	B2C1254	03/18/2022	03/22/22 19:34	D10
4-Chloro-3-methylphenol	ND	68000	100	B2C1254	03/18/2022	03/22/22 19:34	D10
4-Chloroaniline	ND	68000	100	B2C1254	03/18/2022	03/22/22 19:34	D10
4-Chlorophenyl-phenylether	ND	34000	100	B2C1254	03/18/2022	03/22/22 19:34	D10
4-Methylphenol	ND	34000	100	B2C1254	03/18/2022	03/22/22 19:34	D10
4-Nitroaniline	ND	170000	100	B2C1254	03/18/2022	03/22/22 19:34	D10
4-Nitrophenol	ND	34000	100	B2C1254	03/18/2022	03/22/22 19:34	D10
Acenaphthene	ND	34000	100	B2C1254	03/18/2022	03/22/22 19:34	D10
Acenaphthylene	ND	34000	100	B2C1254	03/18/2022	03/22/22 19:34	D10
Anthracene	ND	34000	100	B2C1254	03/18/2022	03/22/22 19:34	D10
Benzidine (M)	ND	170000	100	B2C1254	03/18/2022	03/22/22 19:34	D10
Benzo(a)anthracene	ND	34000	100	B2C1254	03/18/2022	03/22/22 19:34	D10
Benzo(a)pyrene	ND	34000	100	B2C1254	03/18/2022	03/22/22 19:34	D10
Benzo(b)fluoranthene	ND	34000	100	B2C1254	03/18/2022	03/22/22 19:34	D10
Benzo(g,h,i)perylene	ND	34000	100	B2C1254	03/18/2022	03/22/22 19:34	D10
Benzo(k)fluoranthene	ND	34000	100	B2C1254	03/18/2022	03/22/22 19:34	D10
Benzoic acid	ND	170000	100	B2C1254	03/18/2022	03/22/22 19:34	D10
Benzyl alcohol	ND	68000	100	B2C1254	03/18/2022	03/22/22 19:34	D10
bis(2-chloroethoxy)methane	ND	34000	100	B2C1254	03/18/2022	03/22/22 19:34	D10
bis(2-Chloroethyl)ether	ND	34000	100	B2C1254	03/18/2022	03/22/22 19:34	D10

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Bianca Mintz
Irvine , CA 92612		Reported :	04/13/2022

Client Sample ID: Sample 26
Lab ID: 2200381-04

Semivolatile Organic Compounds by EPA 8270C **Analyst: EB**

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
bis(2-chloroisopropyl)ether	ND	34000	100	B2C1254	03/18/2022	03/22/22 19:34	D10
bis(2-ethylhexyl)phthalate	ND	34000	100	B2C1254	03/18/2022	03/22/22 19:34	D10
Butylbenzylphthalate	ND	34000	100	B2C1254	03/18/2022	03/22/22 19:34	D10
Chrysene	ND	34000	100	B2C1254	03/18/2022	03/22/22 19:34	D10
Di-n-butylphthalate	ND	34000	100	B2C1254	03/18/2022	03/22/22 19:34	D10
Di-n-octylphthalate	ND	34000	100	B2C1254	03/18/2022	03/22/22 19:34	D10
Dibenz(a,h)anthracene	ND	34000	100	B2C1254	03/18/2022	03/22/22 19:34	D10
Dibenzofuran	ND	34000	100	B2C1254	03/18/2022	03/22/22 19:34	D10
Diethyl phthalate	ND	34000	100	B2C1254	03/18/2022	03/22/22 19:34	D10
Dimethyl phthalate	ND	34000	100	B2C1254	03/18/2022	03/22/22 19:34	D10
Fluoranthene	ND	34000	100	B2C1254	03/18/2022	03/22/22 19:34	D10
Fluorene	ND	34000	100	B2C1254	03/18/2022	03/22/22 19:34	D10
Hexachlorobenzene	ND	34000	100	B2C1254	03/18/2022	03/22/22 19:34	D10
Hexachlorobutadiene	ND	68000	100	B2C1254	03/18/2022	03/22/22 19:34	D10
Hexachlorocyclopentadiene	ND	68000	100	B2C1254	03/18/2022	03/22/22 19:34	D10
Hexachloroethane	ND	34000	100	B2C1254	03/18/2022	03/22/22 19:34	D10
Indeno(1,2,3-cd)pyrene	ND	34000	100	B2C1254	03/18/2022	03/22/22 19:34	D10
Isophorone	ND	34000	100	B2C1254	03/18/2022	03/22/22 19:34	D10
N-Nitroso-di-n propylamine	ND	34000	100	B2C1254	03/18/2022	03/22/22 19:34	D10
N-Nitrosodiphenylamine	ND	34000	100	B2C1254	03/18/2022	03/22/22 19:34	D10
Naphthalene	ND	34000	100	B2C1254	03/18/2022	03/22/22 19:34	D10
Nitrobenzene	ND	34000	100	B2C1254	03/18/2022	03/22/22 19:34	D10
Pentachlorophenol	ND	170000	100	B2C1254	03/18/2022	03/22/22 19:34	D10
Phenanthrene	ND	34000	100	B2C1254	03/18/2022	03/22/22 19:34	D10
Phenol	ND	34000	100	B2C1254	03/18/2022	03/22/22 19:34	D10
Pyrene	ND	34000	100	B2C1254	03/18/2022	03/22/22 19:34	D10
Pyridine	ND	170000	100	B2C1254	03/18/2022	03/22/22 19:34	D10
Surrogate: 1,2-Dichlorobenzene-d4	*17.0 %*	*23 - 102*		B2C1254	03/18/2022	*03/22/22 19:34*	S4
Surrogate: 2,4,6-Tribromophenol	*0%*	*3 - 138*		B2C1254	03/18/2022	*03/22/22 19:34*	S4
Surrogate: 2-Chlorophenol-d4	*24.7 %*	*18 - 105*		B2C1254	03/18/2022	*03/22/22 19:34*	
Surrogate: 2-Fluorobiphenyl	*50.0 %*	*34 - 106*		B2C1254	03/18/2022	*03/22/22 19:34*	
Surrogate: 2-Fluorophenol	*0%*	*16 - 94*		B2C1254	03/18/2022	*03/22/22 19:34*	S4
Surrogate: 4-Terphenyl-d14	*55.0 %*	*31 - 130*		B2C1254	03/18/2022	*03/22/22 19:34*	
Surrogate: Nitrobenzene-d5	*31.0 %*	*23 - 102*		B2C1254	03/18/2022	*03/22/22 19:34*	
Surrogate: Phenol-d6	*19.3 %*	*14 - 104*		B2C1254	03/18/2022	*03/22/22 19:34*	

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Bianca Mintz
Irvine , CA 92612		Reported :	04/13/2022

Client Sample ID: Sample 27
Lab ID: 2200381-05

Title 22 Metals by ICP-AES EPA 6010B

Analyst: WT

Analyte	Result (mg/kg dry)	PQL (mg/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	**7.1**	2.1	1	B2C1253	03/18/2022	03/21/22 15:57	
Arsenic	**3.3**	1.0	1	B2C1253	03/18/2022	03/21/22 15:57	
Barium	**230**	1.0	1	B2C1253	03/18/2022	03/21/22 15:57	
Beryllium	ND	1.0	1	B2C1253	03/18/2022	03/21/22 15:57	
Cadmium	**3.9**	1.0	1	B2C1253	03/18/2022	03/21/22 15:57	
Chromium	**93**	1.0	1	B2C1253	03/18/2022	03/21/22 15:57	
Cobalt	**9.0**	1.0	1	B2C1253	03/18/2022	03/21/22 15:57	
Copper	**140**	2.1	1	B2C1253	03/18/2022	03/21/22 15:57	
Lead	**120**	1.0	1	B2C1253	03/18/2022	03/21/22 15:57	
Molybdenum	**10**	1.0	1	B2C1253	03/18/2022	03/21/22 15:57	
Nickel	**41**	1.0	1	B2C1253	03/18/2022	03/21/22 15:57	
Selenium	**6.2**	1.0	1	B2C1253	03/18/2022	03/21/22 15:57	
Silver	ND	1.0	1	B2C1253	03/18/2022	03/21/22 15:57	
Thallium	ND	1.0	1	B2C1253	03/18/2022	03/21/22 15:57	
Vanadium	**34**	1.0	1	B2C1253	03/18/2022	03/21/22 15:57	
Zinc	**2900**	10	10	B2C1253	03/18/2022	03/22/22 12:33	

Diesel and Oil Range Organics by EPA 8015B

Analyst: JV

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	**560**	400	20	B2C1262	03/18/2022	03/19/22 06:39	D10
ORO	**3400**	400	20	B2C1262	03/18/2022	03/19/22 06:39	D10
Surrogate: p-Terphenyl	*72.2 %*	*62 - 141*		B2C1262	03/18/2022	*03/19/22 06:39*	

Polychlorinated Biphenyls by EPA 8082

Analyst: KL

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aroclor 1016	ND	17	1	B2C1240	03/17/2022	03/18/22 18:23	
Aroclor 1221	ND	17	1	B2C1240	03/17/2022	03/18/22 18:23	
Aroclor 1232	ND	17	1	B2C1240	03/17/2022	03/18/22 18:23	
Aroclor 1242	ND	17	1	B2C1240	03/17/2022	03/18/22 18:23	
Aroclor 1248	ND	17	1	B2C1240	03/17/2022	03/18/22 18:23	
Aroclor 1254	ND	17	1	B2C1240	03/17/2022	03/18/22 18:23	
Aroclor 1260	ND	17	1	B2C1240	03/17/2022	03/18/22 18:23	
Surrogate: Decachlorobiphenyl	*19.9 %*	*0 - 87*		B2C1240	03/17/2022	*03/18/22 18:23*	
Surrogate: Tetrachloro-m-xylene	*20.6 %*	*0 - 103*		B2C1240	03/17/2022	*03/18/22 18:23*	

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Bianca Mintz
Irvine , CA 92612		Reported :	04/13/2022

Client Sample ID: Sample 27
Lab ID: 2200381-05

Semivolatile Organic Compounds by EPA 8270C **Analyst: EB**

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,2,4-Trichlorobenzene	ND	35000	100	B2C1254	03/18/2022	03/22/22 20:00	D10
1,2-Dichlorobenzene	ND	35000	100	B2C1254	03/18/2022	03/22/22 20:00	D10
1,3-Dichlorobenzene	ND	35000	100	B2C1254	03/18/2022	03/22/22 20:00	D10
1,4-Dichlorobenzene	ND	35000	100	B2C1254	03/18/2022	03/22/22 20:00	D10
2,4,5-Trichlorophenol	ND	35000	100	B2C1254	03/18/2022	03/22/22 20:00	D10
2,4,6-Trichlorophenol	ND	35000	100	B2C1254	03/18/2022	03/22/22 20:00	D10
2,4-Dichlorophenol	ND	170000	100	B2C1254	03/18/2022	03/22/22 20:00	D10
2,4-Dimethylphenol	ND	35000	100	B2C1254	03/18/2022	03/22/22 20:00	D10
2,4-Dinitrophenol	ND	170000	100	B2C1254	03/18/2022	03/22/22 20:00	D10
2,4-Dinitrotoluene	ND	35000	100	B2C1254	03/18/2022	03/22/22 20:00	D10
2,6-Dinitrotoluene	ND	35000	100	B2C1254	03/18/2022	03/22/22 20:00	D10
2-Chloronaphthalene	ND	35000	100	B2C1254	03/18/2022	03/22/22 20:00	D10
2-Chlorophenol	ND	35000	100	B2C1254	03/18/2022	03/22/22 20:00	D10
2-Methylnaphthalene	ND	35000	100	B2C1254	03/18/2022	03/22/22 20:00	D10
2-Methylphenol	ND	35000	100	B2C1254	03/18/2022	03/22/22 20:00	D10
2-Nitroaniline	ND	170000	100	B2C1254	03/18/2022	03/22/22 20:00	D10
2-Nitrophenol	ND	35000	100	B2C1254	03/18/2022	03/22/22 20:00	D10
3,3´-Dichlorobenzidine	ND	69000	100	B2C1254	03/18/2022	03/22/22 20:00	D10
3-Nitroaniline	ND	170000	100	B2C1254	03/18/2022	03/22/22 20:00	D10
4,6-Dinitro-2-methyphenol	ND	170000	100	B2C1254	03/18/2022	03/22/22 20:00	D10
4-Bromophenyl-phenylether	ND	35000	100	B2C1254	03/18/2022	03/22/22 20:00	D10
4-Chloro-3-methylphenol	ND	69000	100	B2C1254	03/18/2022	03/22/22 20:00	D10
4-Chloroaniline	ND	69000	100	B2C1254	03/18/2022	03/22/22 20:00	D10
4-Chlorophenyl-phenylether	ND	35000	100	B2C1254	03/18/2022	03/22/22 20:00	D10
4-Methylphenol	ND	35000	100	B2C1254	03/18/2022	03/22/22 20:00	D10
4-Nitroaniline	ND	170000	100	B2C1254	03/18/2022	03/22/22 20:00	D10
4-Nitrophenol	ND	35000	100	B2C1254	03/18/2022	03/22/22 20:00	D10
Acenaphthene	ND	35000	100	B2C1254	03/18/2022	03/22/22 20:00	D10
Acenaphthylene	ND	35000	100	B2C1254	03/18/2022	03/22/22 20:00	D10
Anthracene	ND	35000	100	B2C1254	03/18/2022	03/22/22 20:00	D10
Benzidine (M)	ND	170000	100	B2C1254	03/18/2022	03/22/22 20:00	D10
Benzo(a)anthracene	ND	35000	100	B2C1254	03/18/2022	03/22/22 20:00	D10
Benzo(a)pyrene	ND	35000	100	B2C1254	03/18/2022	03/22/22 20:00	D10
Benzo(b)fluoranthene	ND	35000	100	B2C1254	03/18/2022	03/22/22 20:00	D10
Benzo(g,h,i)perylene	ND	35000	100	B2C1254	03/18/2022	03/22/22 20:00	D10
Benzo(k)fluoranthene	ND	35000	100	B2C1254	03/18/2022	03/22/22 20:00	D10
Benzoic acid	ND	170000	100	B2C1254	03/18/2022	03/22/22 20:00	D10
Benzyl alcohol	ND	69000	100	B2C1254	03/18/2022	03/22/22 20:00	D10
bis(2-chloroethoxy)methane	ND	35000	100	B2C1254	03/18/2022	03/22/22 20:00	D10
bis(2-Chloroethyl)ether	ND	35000	100	B2C1254	03/18/2022	03/22/22 20:00	D10

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Bianca Mintz
Irvine , CA 92612		Reported :	04/13/2022

Client Sample ID: Sample 27
Lab ID: 2200381-05

Semivolatile Organic Compounds by EPA 8270C **Analyst: EB**

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
bis(2-chloroisopropyl)ether	ND	35000	100	B2C1254	03/18/2022	03/22/22 20:00	D10
bis(2-ethylhexyl)phthalate	ND	35000	100	B2C1254	03/18/2022	03/22/22 20:00	D10
Butylbenzylphthalate	ND	35000	100	B2C1254	03/18/2022	03/22/22 20:00	D10
Chrysene	ND	35000	100	B2C1254	03/18/2022	03/22/22 20:00	D10
Di-n-butylphthalate	ND	35000	100	B2C1254	03/18/2022	03/22/22 20:00	D10
Di-n-octylphthalate	ND	35000	100	B2C1254	03/18/2022	03/22/22 20:00	D10
Dibenz(a,h)anthracene	ND	35000	100	B2C1254	03/18/2022	03/22/22 20:00	D10
Dibenzofuran	ND	35000	100	B2C1254	03/18/2022	03/22/22 20:00	D10
Diethyl phthalate	ND	35000	100	B2C1254	03/18/2022	03/22/22 20:00	D10
Dimethyl phthalate	ND	35000	100	B2C1254	03/18/2022	03/22/22 20:00	D10
Fluoranthene	ND	35000	100	B2C1254	03/18/2022	03/22/22 20:00	D10
Fluorene	ND	35000	100	B2C1254	03/18/2022	03/22/22 20:00	D10
Hexachlorobenzene	ND	35000	100	B2C1254	03/18/2022	03/22/22 20:00	D10
Hexachlorobutadiene	ND	69000	100	B2C1254	03/18/2022	03/22/22 20:00	D10
Hexachlorocyclopentadiene	ND	69000	100	B2C1254	03/18/2022	03/22/22 20:00	D10
Hexachloroethane	ND	35000	100	B2C1254	03/18/2022	03/22/22 20:00	D10
Indeno(1,2,3-cd)pyrene	ND	35000	100	B2C1254	03/18/2022	03/22/22 20:00	D10
Isophorone	ND	35000	100	B2C1254	03/18/2022	03/22/22 20:00	D10
N-Nitroso-di-n propylamine	ND	35000	100	B2C1254	03/18/2022	03/22/22 20:00	D10
N-Nitrosodiphenylamine	ND	35000	100	B2C1254	03/18/2022	03/22/22 20:00	D10
Naphthalene	ND	35000	100	B2C1254	03/18/2022	03/22/22 20:00	D10
Nitrobenzene	ND	35000	100	B2C1254	03/18/2022	03/22/22 20:00	D10
Pentachlorophenol	ND	170000	100	B2C1254	03/18/2022	03/22/22 20:00	D10
Phenanthrene	ND	35000	100	B2C1254	03/18/2022	03/22/22 20:00	D10
Phenol	ND	35000	100	B2C1254	03/18/2022	03/22/22 20:00	D10
Pyrene	ND	35000	100	B2C1254	03/18/2022	03/22/22 20:00	D10
Pyridine	ND	170000	100	B2C1254	03/18/2022	03/22/22 20:00	D10
Surrogate: 1,2-Dichlorobenzene-d4	*16.0 %*	*23 - 102*		B2C1254	03/18/2022	*03/22/22 20:00*	S4
Surrogate: 2,4,6-Tribromophenol	*0%*	*3 - 138*		B2C1254	03/18/2022	*03/22/22 20:00*	S4
Surrogate: 2-Chlorophenol-d4	*17.3 %*	*18 - 105*		B2C1254	03/18/2022	*03/22/22 20:00*	S4
Surrogate: 2-Fluorobiphenyl	*37.0 %*	*34 - 106*		B2C1254	03/18/2022	*03/22/22 20:00*	
Surrogate: 2-Fluorophenol	*6.00 %*	*16 - 94*		B2C1254	03/18/2022	*03/22/22 20:00*	S4
Surrogate: 4-Terphenyl-d14	*41.0 %*	*31 - 130*		B2C1254	03/18/2022	*03/22/22 20:00*	
Surrogate: Nitrobenzene-d5	*17.0 %*	*23 - 102*		B2C1254	03/18/2022	*03/22/22 20:00*	S4
Surrogate: Phenol-d6	*6.67 %*	*14 - 104*		B2C1254	03/18/2022	*03/22/22 20:00*	S4

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Bianca Mintz
Irvine , CA 92612		Reported :	04/13/2022

Client Sample ID: Sample 28
Lab ID: 2200381-06

Title 22 Metals by ICP-AES EPA 6010B

Analyst: WT

Analyte	Result (mg/kg dry)	PQL (mg/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	**10**	2.7	1	B2C1253	03/18/2022	03/22/22 11:45	
Arsenic	ND	1.4	1	B2C1253	03/18/2022	03/22/22 11:45	
Barium	**310**	1.4	1	B2C1253	03/18/2022	03/22/22 11:45	
Beryllium	ND	1.4	1	B2C1253	03/18/2022	03/22/22 11:45	
Cadmium	**6.5**	1.4	1	B2C1253	03/18/2022	03/22/22 11:45	
Chromium	**120**	1.4	1	B2C1253	03/18/2022	03/22/22 11:45	
Cobalt	**11**	1.4	1	B2C1253	03/18/2022	03/22/22 11:45	
Copper	**180**	2.7	1	B2C1253	03/18/2022	03/22/22 11:45	
Lead	**150**	1.4	1	B2C1253	03/18/2022	03/22/22 11:45	
Molybdenum	**11**	1.4	1	B2C1253	03/18/2022	03/22/22 11:45	
Nickel	**56**	1.4	1	B2C1253	03/18/2022	03/22/22 11:45	
Selenium	**14**	1.4	1	B2C1253	03/18/2022	03/22/22 11:45	
Silver	ND	1.4	1	B2C1253	03/18/2022	03/22/22 11:45	
Thallium	ND	1.4	1	B2C1253	03/18/2022	03/22/22 11:45	
Vanadium	**52**	1.4	1	B2C1253	03/18/2022	03/22/22 11:45	
Zinc	**3000**	1.4	1	B2C1253	03/18/2022	03/22/22 11:45	

Diesel and Oil Range Organics by EPA 8015B

Analyst: JV

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	ND	400	20	B2C1262	03/18/2022	03/19/22 06:57	D10
ORO	**790**	400	20	B2C1262	03/18/2022	03/19/22 06:57	D10
Surrogate: p-Terphenyl	*57.9 %*	*62 - 141*		B2C1262	03/18/2022	*03/19/22 06:57*	S4

Polychlorinated Biphenyls by EPA 8082

Analyst: KL

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aroclor 1016	ND	22	1	B2C1264	03/18/2022	03/22/22 19:48	
Aroclor 1221	ND	22	1	B2C1264	03/18/2022	03/22/22 19:48	
Aroclor 1232	ND	22	1	B2C1264	03/18/2022	03/22/22 19:48	
Aroclor 1242	ND	22	1	B2C1264	03/18/2022	03/22/22 19:48	
Aroclor 1248	ND	22	1	B2C1264	03/18/2022	03/22/22 19:48	
Aroclor 1254	**78**	22	1	B2C1264	03/18/2022	03/22/22 19:48	
Aroclor 1260	**45**	22	1	B2C1264	03/18/2022	03/22/22 19:48	
Surrogate: Decachlorobiphenyl	*25.8 %*	*0 - 87*		B2C1264	03/18/2022	*03/22/22 19:48*	
Surrogate: Tetrachloro-m-xylene	*26.4 %*	*0 - 103*		B2C1264	03/18/2022	*03/22/22 19:48*	

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Bianca Mintz
Irvine , CA 92612		Reported :	04/13/2022

Client Sample ID: Sample 28
Lab ID: 2200381-06

Semivolatile Organic Compounds by EPA 8270C **Analyst: EB**

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,2,4-Trichlorobenzene	ND	45000	100	B2C1254	03/18/2022	03/22/22 20:26	D10
1,2-Dichlorobenzene	ND	45000	100	B2C1254	03/18/2022	03/22/22 20:26	D10
1,3-Dichlorobenzene	ND	45000	100	B2C1254	03/18/2022	03/22/22 20:26	D10
1,4-Dichlorobenzene	ND	45000	100	B2C1254	03/18/2022	03/22/22 20:26	D10
2,4,5-Trichlorophenol	ND	45000	100	B2C1254	03/18/2022	03/22/22 20:26	D10
2,4,6-Trichlorophenol	ND	45000	100	B2C1254	03/18/2022	03/22/22 20:26	D10
2,4-Dichlorophenol	ND	220000	100	B2C1254	03/18/2022	03/22/22 20:26	D10
2,4-Dimethylphenol	ND	45000	100	B2C1254	03/18/2022	03/22/22 20:26	D10
2,4-Dinitrophenol	ND	220000	100	B2C1254	03/18/2022	03/22/22 20:26	D10
2,4-Dinitrotoluene	ND	45000	100	B2C1254	03/18/2022	03/22/22 20:26	D10
2,6-Dinitrotoluene	ND	45000	100	B2C1254	03/18/2022	03/22/22 20:26	D10
2-Chloronaphthalene	ND	45000	100	B2C1254	03/18/2022	03/22/22 20:26	D10
2-Chlorophenol	ND	45000	100	B2C1254	03/18/2022	03/22/22 20:26	D10
2-Methylnaphthalene	ND	45000	100	B2C1254	03/18/2022	03/22/22 20:26	D10
2-Methylphenol	ND	45000	100	B2C1254	03/18/2022	03/22/22 20:26	D10
2-Nitroaniline	ND	220000	100	B2C1254	03/18/2022	03/22/22 20:26	D10
2-Nitrophenol	ND	45000	100	B2C1254	03/18/2022	03/22/22 20:26	D10
3,3´-Dichlorobenzidine	ND	90000	100	B2C1254	03/18/2022	03/22/22 20:26	D10
3-Nitroaniline	ND	220000	100	B2C1254	03/18/2022	03/22/22 20:26	D10
4,6-Dinitro-2-methyphenol	ND	220000	100	B2C1254	03/18/2022	03/22/22 20:26	D10
4-Bromophenyl-phenylether	ND	45000	100	B2C1254	03/18/2022	03/22/22 20:26	D10
4-Chloro-3-methylphenol	ND	90000	100	B2C1254	03/18/2022	03/22/22 20:26	D10
4-Chloroaniline	ND	90000	100	B2C1254	03/18/2022	03/22/22 20:26	D10
4-Chlorophenyl-phenylether	ND	45000	100	B2C1254	03/18/2022	03/22/22 20:26	D10
4-Methylphenol	ND	45000	100	B2C1254	03/18/2022	03/22/22 20:26	D10
4-Nitroaniline	ND	220000	100	B2C1254	03/18/2022	03/22/22 20:26	D10
4-Nitrophenol	ND	45000	100	B2C1254	03/18/2022	03/22/22 20:26	D10
Acenaphthene	ND	45000	100	B2C1254	03/18/2022	03/22/22 20:26	D10
Acenaphthylene	ND	45000	100	B2C1254	03/18/2022	03/22/22 20:26	D10
Anthracene	ND	45000	100	B2C1254	03/18/2022	03/22/22 20:26	D10
Benzidine (M)	ND	220000	100	B2C1254	03/18/2022	03/22/22 20:26	D10
Benzo(a)anthracene	ND	45000	100	B2C1254	03/18/2022	03/22/22 20:26	D10
Benzo(a)pyrene	ND	45000	100	B2C1254	03/18/2022	03/22/22 20:26	D10
Benzo(b)fluoranthene	ND	45000	100	B2C1254	03/18/2022	03/22/22 20:26	D10
Benzo(g,h,i)perylene	ND	45000	100	B2C1254	03/18/2022	03/22/22 20:26	D10
Benzo(k)fluoranthene	ND	45000	100	B2C1254	03/18/2022	03/22/22 20:26	D10
Benzoic acid	ND	220000	100	B2C1254	03/18/2022	03/22/22 20:26	D10
Benzyl alcohol	ND	90000	100	B2C1254	03/18/2022	03/22/22 20:26	D10
bis(2-chloroethoxy)methane	ND	45000	100	B2C1254	03/18/2022	03/22/22 20:26	D10
bis(2-Chloroethyl)ether	ND	45000	100	B2C1254	03/18/2022	03/22/22 20:26	D10

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Bianca Mintz
Irvine , CA 92612		Reported :	04/13/2022

Client Sample ID: Sample 28
Lab ID: 2200381-06

Semivolatile Organic Compounds by EPA 8270C **Analyst: EB**

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
bis(2-chloroisopropyl)ether	ND	45000	100	B2C1254	03/18/2022	03/22/22 20:26	D10
bis(2-ethylhexyl)phthalate	ND	45000	100	B2C1254	03/18/2022	03/22/22 20:26	D10
Butylbenzylphthalate	ND	45000	100	B2C1254	03/18/2022	03/22/22 20:26	D10
Chrysene	ND	45000	100	B2C1254	03/18/2022	03/22/22 20:26	D10
Di-n-butylphthalate	ND	45000	100	B2C1254	03/18/2022	03/22/22 20:26	D10
Di-n-octylphthalate	ND	45000	100	B2C1254	03/18/2022	03/22/22 20:26	D10
Dibenz(a,h)anthracene	ND	45000	100	B2C1254	03/18/2022	03/22/22 20:26	D10
Dibenzofuran	ND	45000	100	B2C1254	03/18/2022	03/22/22 20:26	D10
Diethyl phthalate	ND	45000	100	B2C1254	03/18/2022	03/22/22 20:26	D10
Dimethyl phthalate	ND	45000	100	B2C1254	03/18/2022	03/22/22 20:26	D10
Fluoranthene	ND	45000	100	B2C1254	03/18/2022	03/22/22 20:26	D10
Fluorene	ND	45000	100	B2C1254	03/18/2022	03/22/22 20:26	D10
Hexachlorobenzene	ND	45000	100	B2C1254	03/18/2022	03/22/22 20:26	D10
Hexachlorobutadiene	ND	90000	100	B2C1254	03/18/2022	03/22/22 20:26	D10
Hexachlorocyclopentadiene	ND	90000	100	B2C1254	03/18/2022	03/22/22 20:26	D10
Hexachloroethane	ND	45000	100	B2C1254	03/18/2022	03/22/22 20:26	D10
Indeno(1,2,3-cd)pyrene	ND	45000	100	B2C1254	03/18/2022	03/22/22 20:26	D10
Isophorone	ND	45000	100	B2C1254	03/18/2022	03/22/22 20:26	D10
N-Nitroso-di-n propylamine	ND	45000	100	B2C1254	03/18/2022	03/22/22 20:26	D10
N-Nitrosodiphenylamine	ND	45000	100	B2C1254	03/18/2022	03/22/22 20:26	D10
Naphthalene	ND	45000	100	B2C1254	03/18/2022	03/22/22 20:26	D10
Nitrobenzene	ND	45000	100	B2C1254	03/18/2022	03/22/22 20:26	D10
Pentachlorophenol	ND	220000	100	B2C1254	03/18/2022	03/22/22 20:26	D10
Phenanthrene	ND	45000	100	B2C1254	03/18/2022	03/22/22 20:26	D10
Phenol	ND	45000	100	B2C1254	03/18/2022	03/22/22 20:26	D10
Pyrene	ND	45000	100	B2C1254	03/18/2022	03/22/22 20:26	D10
Pyridine	ND	220000	100	B2C1254	03/18/2022	03/22/22 20:26	D10
Surrogate: 1,2-Dichlorobenzene-d4	*35.0 %*	*23 - 102*		B2C1254	03/18/2022	*03/22/22 20:26*	
Surrogate: 2,4,6-Tribromophenol	*15.3 %*	*3 - 138*		B2C1254	03/18/2022	*03/22/22 20:26*	
Surrogate: 2-Chlorophenol-d4	*28.7 %*	*18 - 105*		B2C1254	03/18/2022	*03/22/22 20:26*	
Surrogate: 2-Fluorobiphenyl	*54.0 %*	*34 - 106*		B2C1254	03/18/2022	*03/22/22 20:26*	
Surrogate: 2-Fluorophenol	*5.33 %*	*16 - 94*		B2C1254	03/18/2022	*03/22/22 20:26*	S4
Surrogate: 4-Terphenyl-d14	*57.0 %*	*31 - 130*		B2C1254	03/18/2022	*03/22/22 20:26*	
Surrogate: Nitrobenzene-d5	*32.0 %*	*23 - 102*		B2C1254	03/18/2022	*03/22/22 20:26*	
Surrogate: Phenol-d6	*17.3 %*	*14 - 104*		B2C1254	03/18/2022	*03/22/22 20:26*	

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Bianca Mintz
Irvine , CA 92612		Reported :	04/13/2022

Client Sample ID: Sample 29
Lab ID: 2200381-07

Title 22 Metals by ICP-AES EPA 6010B

Analyst: WT

Analyte	Result (mg/kg dry)	PQL (mg/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	**6.5**	2.0	1	B2C1253	03/18/2022	03/21/22 16:32	
Arsenic	**3.1**	1.0	1	B2C1253	03/18/2022	03/21/22 16:32	
Barium	**110**	1.0	1	B2C1253	03/18/2022	03/21/22 16:32	
Beryllium	ND	1.0	1	B2C1253	03/18/2022	03/21/22 16:32	
Cadmium	**3.6**	1.0	1	B2C1253	03/18/2022	03/21/22 16:32	
Chromium	**80**	1.0	1	B2C1253	03/18/2022	03/21/22 16:32	
Cobalt	**6.7**	1.0	1	B2C1253	03/18/2022	03/21/22 16:32	
Copper	**150**	2.0	1	B2C1253	03/18/2022	03/21/22 16:32	
Lead	**58**	1.0	1	B2C1253	03/18/2022	03/21/22 16:32	
Molybdenum	**8.8**	1.0	1	B2C1253	03/18/2022	03/21/22 16:32	
Nickel	**36**	1.0	1	B2C1253	03/18/2022	03/21/22 16:32	
Selenium	**7.1**	1.0	1	B2C1253	03/18/2022	03/21/22 16:32	
Silver	ND	1.0	1	B2C1253	03/18/2022	03/21/22 16:32	
Thallium	ND	1.0	1	B2C1253	03/18/2022	03/21/22 16:32	
Vanadium	**30**	1.0	1	B2C1253	03/18/2022	03/21/22 16:32	
Zinc	**1300**	1.0	1	B2C1253	03/18/2022	03/21/22 16:32	

Diesel and Oil Range Organics by EPA 8015B

Analyst: JV

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	ND	400	20	B2C1262	03/18/2022	03/19/22 07:16	D10
ORO	**590**	400	20	B2C1262	03/18/2022	03/19/22 07:16	D10
Surrogate: p-Terphenyl	*66.2 %*	*62 - 141*		B2C1262	03/18/2022	*03/19/22 07:16*	

Polychlorinated Biphenyls by EPA 8082

Analyst: KL

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aroclor 1016	ND	16	1	B2C1240	03/17/2022	03/18/22 18:42	
Aroclor 1221	ND	16	1	B2C1240	03/17/2022	03/18/22 18:42	
Aroclor 1232	ND	16	1	B2C1240	03/17/2022	03/18/22 18:42	
Aroclor 1242	ND	16	1	B2C1240	03/17/2022	03/18/22 18:42	
Aroclor 1248	ND	16	1	B2C1240	03/17/2022	03/18/22 18:42	
Aroclor 1254	ND	16	1	B2C1240	03/17/2022	03/18/22 18:42	
Aroclor 1260	ND	16	1	B2C1240	03/17/2022	03/18/22 18:42	
Surrogate: Decachlorobiphenyl	*37.4 %*	*0 - 87*		B2C1240	03/17/2022	*03/18/22 18:42*	
Surrogate: Tetrachloro-m-xylene	*44.6 %*	*0 - 103*		B2C1240	03/17/2022	*03/18/22 18:42*	

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Bianca Mintz
Irvine , CA 92612		Reported :	04/13/2022

Client Sample ID: Sample 29
Lab ID: 2200381-07

Semivolatile Organic Compounds by EPA 8270C **Analyst: EB**

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,2,4-Trichlorobenzene	ND	33000	100	B2C1254	03/18/2022	03/22/22 20:53	D10
1,2-Dichlorobenzene	ND	33000	100	B2C1254	03/18/2022	03/22/22 20:53	D10
1,3-Dichlorobenzene	ND	33000	100	B2C1254	03/18/2022	03/22/22 20:53	D10
1,4-Dichlorobenzene	ND	33000	100	B2C1254	03/18/2022	03/22/22 20:53	D10
2,4,5-Trichlorophenol	ND	33000	100	B2C1254	03/18/2022	03/22/22 20:53	D10
2,4,6-Trichlorophenol	ND	33000	100	B2C1254	03/18/2022	03/22/22 20:53	D10
2,4-Dichlorophenol	ND	170000	100	B2C1254	03/18/2022	03/22/22 20:53	D10
2,4-Dimethylphenol	ND	33000	100	B2C1254	03/18/2022	03/22/22 20:53	D10
2,4-Dinitrophenol	ND	170000	100	B2C1254	03/18/2022	03/22/22 20:53	D10
2,4-Dinitrotoluene	ND	33000	100	B2C1254	03/18/2022	03/22/22 20:53	D10
2,6-Dinitrotoluene	ND	33000	100	B2C1254	03/18/2022	03/22/22 20:53	D10
2-Chloronaphthalene	ND	33000	100	B2C1254	03/18/2022	03/22/22 20:53	D10
2-Chlorophenol	ND	33000	100	B2C1254	03/18/2022	03/22/22 20:53	D10
2-Methylnaphthalene	ND	33000	100	B2C1254	03/18/2022	03/22/22 20:53	D10
2-Methylphenol	ND	33000	100	B2C1254	03/18/2022	03/22/22 20:53	D10
2-Nitroaniline	ND	170000	100	B2C1254	03/18/2022	03/22/22 20:53	D10
2-Nitrophenol	ND	33000	100	B2C1254	03/18/2022	03/22/22 20:53	D10
3,3´-Dichlorobenzidine	ND	66000	100	B2C1254	03/18/2022	03/22/22 20:53	D10
3-Nitroaniline	ND	170000	100	B2C1254	03/18/2022	03/22/22 20:53	D10
4,6-Dinitro-2-methyphenol	ND	170000	100	B2C1254	03/18/2022	03/22/22 20:53	D10
4-Bromophenyl-phenylether	ND	33000	100	B2C1254	03/18/2022	03/22/22 20:53	D10
4-Chloro-3-methylphenol	ND	66000	100	B2C1254	03/18/2022	03/22/22 20:53	D10
4-Chloroaniline	ND	66000	100	B2C1254	03/18/2022	03/22/22 20:53	D10
4-Chlorophenyl-phenylether	ND	33000	100	B2C1254	03/18/2022	03/22/22 20:53	D10
4-Methylphenol	ND	33000	100	B2C1254	03/18/2022	03/22/22 20:53	D10
4-Nitroaniline	ND	170000	100	B2C1254	03/18/2022	03/22/22 20:53	D10
4-Nitrophenol	ND	33000	100	B2C1254	03/18/2022	03/22/22 20:53	D10
Acenaphthene	ND	33000	100	B2C1254	03/18/2022	03/22/22 20:53	D10
Acenaphthylene	ND	33000	100	B2C1254	03/18/2022	03/22/22 20:53	D10
Anthracene	ND	33000	100	B2C1254	03/18/2022	03/22/22 20:53	D10
Benzidine (M)	ND	170000	100	B2C1254	03/18/2022	03/22/22 20:53	D10
Benzo(a)anthracene	ND	33000	100	B2C1254	03/18/2022	03/22/22 20:53	D10
Benzo(a)pyrene	ND	33000	100	B2C1254	03/18/2022	03/22/22 20:53	D10
Benzo(b)fluoranthene	ND	33000	100	B2C1254	03/18/2022	03/22/22 20:53	D10
Benzo(g,h,i)perylene	ND	33000	100	B2C1254	03/18/2022	03/22/22 20:53	D10
Benzo(k)fluoranthene	ND	33000	100	B2C1254	03/18/2022	03/22/22 20:53	D10
Benzoic acid	ND	170000	100	B2C1254	03/18/2022	03/22/22 20:53	D10
Benzyl alcohol	ND	66000	100	B2C1254	03/18/2022	03/22/22 20:53	D10
bis(2-chloroethoxy)methane	ND	33000	100	B2C1254	03/18/2022	03/22/22 20:53	D10
bis(2-Chloroethyl)ether	ND	33000	100	B2C1254	03/18/2022	03/22/22 20:53	D10

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Bianca Mintz
Irvine , CA 92612		Reported :	04/13/2022

Client Sample ID: Sample 29
Lab ID: 2200381-07

Semivolatile Organic Compounds by EPA 8270C **Analyst: EB**

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
bis(2-chloroisopropyl)ether	ND	33000	100	B2C1254	03/18/2022	03/22/22 20:53	D10
bis(2-ethylhexyl)phthalate	ND	33000	100	B2C1254	03/18/2022	03/22/22 20:53	D10
Butylbenzylphthalate	ND	33000	100	B2C1254	03/18/2022	03/22/22 20:53	D10
Chrysene	ND	33000	100	B2C1254	03/18/2022	03/22/22 20:53	D10
Di-n-butylphthalate	ND	33000	100	B2C1254	03/18/2022	03/22/22 20:53	D10
Di-n-octylphthalate	ND	33000	100	B2C1254	03/18/2022	03/22/22 20:53	D10
Dibenz(a,h)anthracene	ND	33000	100	B2C1254	03/18/2022	03/22/22 20:53	D10
Dibenzofuran	ND	33000	100	B2C1254	03/18/2022	03/22/22 20:53	D10
Diethyl phthalate	ND	33000	100	B2C1254	03/18/2022	03/22/22 20:53	D10
Dimethyl phthalate	ND	33000	100	B2C1254	03/18/2022	03/22/22 20:53	D10
Fluoranthene	ND	33000	100	B2C1254	03/18/2022	03/22/22 20:53	D10
Fluorene	ND	33000	100	B2C1254	03/18/2022	03/22/22 20:53	D10
Hexachlorobenzene	ND	33000	100	B2C1254	03/18/2022	03/22/22 20:53	D10
Hexachlorobutadiene	ND	66000	100	B2C1254	03/18/2022	03/22/22 20:53	D10
Hexachlorocyclopentadiene	ND	66000	100	B2C1254	03/18/2022	03/22/22 20:53	D10
Hexachloroethane	ND	33000	100	B2C1254	03/18/2022	03/22/22 20:53	D10
Indeno(1,2,3-cd)pyrene	ND	33000	100	B2C1254	03/18/2022	03/22/22 20:53	D10
Isophorone	ND	33000	100	B2C1254	03/18/2022	03/22/22 20:53	D10
N-Nitroso-di-n propylamine	ND	33000	100	B2C1254	03/18/2022	03/22/22 20:53	D10
N-Nitrosodiphenylamine	ND	33000	100	B2C1254	03/18/2022	03/22/22 20:53	D10
Naphthalene	ND	33000	100	B2C1254	03/18/2022	03/22/22 20:53	D10
Nitrobenzene	ND	33000	100	B2C1254	03/18/2022	03/22/22 20:53	D10
Pentachlorophenol	ND	170000	100	B2C1254	03/18/2022	03/22/22 20:53	D10
Phenanthrene	ND	33000	100	B2C1254	03/18/2022	03/22/22 20:53	D10
Phenol	ND	33000	100	B2C1254	03/18/2022	03/22/22 20:53	D10
Pyrene	ND	33000	100	B2C1254	03/18/2022	03/22/22 20:53	D10
Pyridine	ND	170000	100	B2C1254	03/18/2022	03/22/22 20:53	D10
Surrogate: 1,2-Dichlorobenzene-d4	*57.0 %*	*23 - 102*		B2C1254	03/18/2022	*03/22/22 20:53*	
Surrogate: 2,4,6-Tribromophenol	*26.0 %*	*3 - 138*		B2C1254	03/18/2022	*03/22/22 20:53*	
Surrogate: 2-Chlorophenol-d4	*36.7 %*	*18 - 105*		B2C1254	03/18/2022	*03/22/22 20:53*	
Surrogate: 2-Fluorobiphenyl	*76.0 %*	*34 - 106*		B2C1254	03/18/2022	*03/22/22 20:53*	
Surrogate: 2-Fluorophenol	*10.7 %*	*16 - 94*		B2C1254	03/18/2022	*03/22/22 20:53*	S4
Surrogate: 4-Terphenyl-d14	*71.0 %*	*31 - 130*		B2C1254	03/18/2022	*03/22/22 20:53*	
Surrogate: Nitrobenzene-d5	*36.0 %*	*23 - 102*		B2C1254	03/18/2022	*03/22/22 20:53*	
Surrogate: Phenol-d6	*34.7 %*	*14 - 104*		B2C1254	03/18/2022	*03/22/22 20:53*	

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Bianca Mintz
Irvine , CA 92612		Reported :	04/13/2022

Client Sample ID: Sample 30
Lab ID: 2200381-08

Title 22 Metals by ICP-AES EPA 6010B

Analyst: WT

Analyte	Result (mg/kg dry)	PQL (mg/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	**12**	2.0	1	B2C1253	03/18/2022	03/21/22 16:34	
Arsenic	**3.8**	1.0	1	B2C1253	03/18/2022	03/21/22 16:34	
Barium	**430**	1.0	1	B2C1253	03/18/2022	03/21/22 16:34	
Beryllium	**1.1**	1.0	1	B2C1253	03/18/2022	03/21/22 16:34	
Cadmium	**5.0**	1.0	1	B2C1253	03/18/2022	03/21/22 16:34	
Chromium	**120**	1.0	1	B2C1253	03/18/2022	03/21/22 16:34	
Cobalt	**11**	1.0	1	B2C1253	03/18/2022	03/21/22 16:34	
Copper	**180**	2.0	1	B2C1253	03/18/2022	03/21/22 16:34	
Lead	**120**	1.0	1	B2C1253	03/18/2022	03/21/22 16:34	
Molybdenum	**12**	1.0	1	B2C1253	03/18/2022	03/21/22 16:34	
Nickel	**62**	1.0	1	B2C1253	03/18/2022	03/21/22 16:34	
Selenium	**10**	1.0	1	B2C1253	03/18/2022	03/21/22 16:34	
Silver	ND	1.0	1	B2C1253	03/18/2022	03/21/22 16:34	
Thallium	ND	1.0	1	B2C1253	03/18/2022	03/21/22 16:34	
Vanadium	**51**	1.0	1	B2C1253	03/18/2022	03/21/22 16:34	
Zinc	**2600**	10	10	B2C1253	03/18/2022	03/22/22 12:42	

Diesel and Oil Range Organics by EPA 8015B

Analyst: JV

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	ND	400	20	B2C1262	03/18/2022	03/19/22 07:35	D10
ORO	**1800**	400	20	B2C1262	03/18/2022	03/19/22 07:35	D10
Surrogate: p-Terphenyl	*67.0 %*	*62 - 141*		B2C1262	03/18/2022	*03/19/22 07:35*	

Polychlorinated Biphenyls by EPA 8082

Analyst: KL

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aroclor 1016	ND	16	1	B2C1240	03/17/2022	03/18/22 19:01	
Aroclor 1221	ND	16	1	B2C1240	03/17/2022	03/18/22 19:01	
Aroclor 1232	ND	16	1	B2C1240	03/17/2022	03/18/22 19:01	
Aroclor 1242	ND	16	1	B2C1240	03/17/2022	03/18/22 19:01	
Aroclor 1248	ND	16	1	B2C1240	03/17/2022	03/18/22 19:01	
Aroclor 1254	ND	16	1	B2C1240	03/17/2022	03/18/22 19:01	
Aroclor 1260	ND	16	1	B2C1240	03/17/2022	03/18/22 19:01	
Surrogate: Decachlorobiphenyl	*10.5 %*	*0 - 87*		B2C1240	03/17/2022	*03/18/22 19:01*	
Surrogate: Tetrachloro-m-xylene	*11.2 %*	*0 - 103*		B2C1240	03/17/2022	*03/18/22 19:01*	

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Bianca Mintz
Irvine , CA 92612		Reported :	04/13/2022

Client Sample ID: Sample 30
Lab ID: 2200381-08

Semivolatile Organic Compounds by EPA 8270C **Analyst: EB**

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,2,4-Trichlorobenzene	ND	33000	100	B2C1254	03/18/2022	03/22/22 21:19	D10
1,2-Dichlorobenzene	ND	33000	100	B2C1254	03/18/2022	03/22/22 21:19	D10
1,3-Dichlorobenzene	ND	33000	100	B2C1254	03/18/2022	03/22/22 21:19	D10
1,4-Dichlorobenzene	ND	33000	100	B2C1254	03/18/2022	03/22/22 21:19	D10
2,4,5-Trichlorophenol	ND	33000	100	B2C1254	03/18/2022	03/22/22 21:19	D10
2,4,6-Trichlorophenol	ND	33000	100	B2C1254	03/18/2022	03/22/22 21:19	D10
2,4-Dichlorophenol	ND	170000	100	B2C1254	03/18/2022	03/22/22 21:19	D10
2,4-Dimethylphenol	ND	33000	100	B2C1254	03/18/2022	03/22/22 21:19	D10
2,4-Dinitrophenol	ND	170000	100	B2C1254	03/18/2022	03/22/22 21:19	D10
2,4-Dinitrotoluene	ND	33000	100	B2C1254	03/18/2022	03/22/22 21:19	D10
2,6-Dinitrotoluene	ND	33000	100	B2C1254	03/18/2022	03/22/22 21:19	D10
2-Chloronaphthalene	ND	33000	100	B2C1254	03/18/2022	03/22/22 21:19	D10
2-Chlorophenol	ND	33000	100	B2C1254	03/18/2022	03/22/22 21:19	D10
2-Methylnaphthalene	ND	33000	100	B2C1254	03/18/2022	03/22/22 21:19	D10
2-Methylphenol	ND	33000	100	B2C1254	03/18/2022	03/22/22 21:19	D10
2-Nitroaniline	ND	170000	100	B2C1254	03/18/2022	03/22/22 21:19	D10
2-Nitrophenol	ND	33000	100	B2C1254	03/18/2022	03/22/22 21:19	D10
3,3´-Dichlorobenzidine	ND	67000	100	B2C1254	03/18/2022	03/22/22 21:19	D10
3-Nitroaniline	ND	170000	100	B2C1254	03/18/2022	03/22/22 21:19	D10
4,6-Dinitro-2-methyphenol	ND	170000	100	B2C1254	03/18/2022	03/22/22 21:19	D10
4-Bromophenyl-phenylether	ND	33000	100	B2C1254	03/18/2022	03/22/22 21:19	D10
4-Chloro-3-methylphenol	ND	67000	100	B2C1254	03/18/2022	03/22/22 21:19	D10
4-Chloroaniline	ND	67000	100	B2C1254	03/18/2022	03/22/22 21:19	D10
4-Chlorophenyl-phenylether	ND	33000	100	B2C1254	03/18/2022	03/22/22 21:19	D10
4-Methylphenol	ND	33000	100	B2C1254	03/18/2022	03/22/22 21:19	D10
4-Nitroaniline	ND	170000	100	B2C1254	03/18/2022	03/22/22 21:19	D10
4-Nitrophenol	ND	33000	100	B2C1254	03/18/2022	03/22/22 21:19	D10
Acenaphthene	ND	33000	100	B2C1254	03/18/2022	03/22/22 21:19	D10
Acenaphthylene	ND	33000	100	B2C1254	03/18/2022	03/22/22 21:19	D10
Anthracene	ND	33000	100	B2C1254	03/18/2022	03/22/22 21:19	D10
Benzidine (M)	ND	170000	100	B2C1254	03/18/2022	03/22/22 21:19	D10
Benzo(a)anthracene	ND	33000	100	B2C1254	03/18/2022	03/22/22 21:19	D10
Benzo(a)pyrene	ND	33000	100	B2C1254	03/18/2022	03/22/22 21:19	D10
Benzo(b)fluoranthene	ND	33000	100	B2C1254	03/18/2022	03/22/22 21:19	D10
Benzo(g,h,i)perylene	ND	33000	100	B2C1254	03/18/2022	03/22/22 21:19	D10
Benzo(k)fluoranthene	ND	33000	100	B2C1254	03/18/2022	03/22/22 21:19	D10
Benzoic acid	ND	170000	100	B2C1254	03/18/2022	03/22/22 21:19	D10
Benzyl alcohol	ND	67000	100	B2C1254	03/18/2022	03/22/22 21:19	D10
bis(2-chloroethoxy)methane	ND	33000	100	B2C1254	03/18/2022	03/22/22 21:19	D10
bis(2-Chloroethyl)ether	ND	33000	100	B2C1254	03/18/2022	03/22/22 21:19	D10

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Bianca Mintz
Irvine , CA 92612		Reported :	04/13/2022

Client Sample ID: Sample 30
Lab ID: 2200381-08

Semivolatile Organic Compounds by EPA 8270C **Analyst: EB**

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
bis(2-chloroisopropyl)ether	ND	33000	100	B2C1254	03/18/2022	03/22/22 21:19	D10
bis(2-ethylhexyl)phthalate	**57000**	33000	100	B2C1254	03/18/2022	03/22/22 21:19	D10
Butylbenzylphthalate	ND	33000	100	B2C1254	03/18/2022	03/22/22 21:19	D10
Chrysene	ND	33000	100	B2C1254	03/18/2022	03/22/22 21:19	D10
Di-n-butylphthalate	ND	33000	100	B2C1254	03/18/2022	03/22/22 21:19	D10
Di-n-octylphthalate	ND	33000	100	B2C1254	03/18/2022	03/22/22 21:19	D10
Dibenz(a,h)anthracene	ND	33000	100	B2C1254	03/18/2022	03/22/22 21:19	D10
Dibenzofuran	ND	33000	100	B2C1254	03/18/2022	03/22/22 21:19	D10
Diethyl phthalate	ND	33000	100	B2C1254	03/18/2022	03/22/22 21:19	D10
Dimethyl phthalate	ND	33000	100	B2C1254	03/18/2022	03/22/22 21:19	D10
Fluoranthene	ND	33000	100	B2C1254	03/18/2022	03/22/22 21:19	D10
Fluorene	ND	33000	100	B2C1254	03/18/2022	03/22/22 21:19	D10
Hexachlorobenzene	ND	33000	100	B2C1254	03/18/2022	03/22/22 21:19	D10
Hexachlorobutadiene	ND	67000	100	B2C1254	03/18/2022	03/22/22 21:19	D10
Hexachlorocyclopentadiene	ND	67000	100	B2C1254	03/18/2022	03/22/22 21:19	D10
Hexachloroethane	ND	33000	100	B2C1254	03/18/2022	03/22/22 21:19	D10
Indeno(1,2,3-cd)pyrene	ND	33000	100	B2C1254	03/18/2022	03/22/22 21:19	D10
Isophorone	ND	33000	100	B2C1254	03/18/2022	03/22/22 21:19	D10
N-Nitroso-di-n propylamine	ND	33000	100	B2C1254	03/18/2022	03/22/22 21:19	D10
N-Nitrosodiphenylamine	ND	33000	100	B2C1254	03/18/2022	03/22/22 21:19	D10
Naphthalene	ND	33000	100	B2C1254	03/18/2022	03/22/22 21:19	D10
Nitrobenzene	ND	33000	100	B2C1254	03/18/2022	03/22/22 21:19	D10
Pentachlorophenol	ND	170000	100	B2C1254	03/18/2022	03/22/22 21:19	D10
Phenanthrene	ND	33000	100	B2C1254	03/18/2022	03/22/22 21:19	D10
Phenol	ND	33000	100	B2C1254	03/18/2022	03/22/22 21:19	D10
Pyrene	ND	33000	100	B2C1254	03/18/2022	03/22/22 21:19	D10
Pyridine	ND	170000	100	B2C1254	03/18/2022	03/22/22 21:19	D10
Surrogate: 1,2-Dichlorobenzene-d4	*39.0 %*	*23 - 102*		B2C1254	03/18/2022	*03/22/22 21:19*	
Surrogate: 2,4,6-Tribromophenol	*0%*	*3 - 138*		B2C1254	03/18/2022	*03/22/22 21:19*	S4
Surrogate: 2-Chlorophenol-d4	*26.7 %*	*18 - 105*		B2C1254	03/18/2022	*03/22/22 21:19*	
Surrogate: 2-Fluorobiphenyl	*58.0 %*	*34 - 106*		B2C1254	03/18/2022	*03/22/22 21:19*	
Surrogate: 2-Fluorophenol	*0%*	*16 - 94*		B2C1254	03/18/2022	*03/22/22 21:19*	S4
Surrogate: 4-Terphenyl-d14	*50.0 %*	*31 - 130*		B2C1254	03/18/2022	*03/22/22 21:19*	
Surrogate: Nitrobenzene-d5	*38.0 %*	*23 - 102*		B2C1254	03/18/2022	*03/22/22 21:19*	
Surrogate: Phenol-d6	*19.3 %*	*14 - 104*		B2C1254	03/18/2022	*03/22/22 21:19*	

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Bianca Mintz
Irvine , CA 92612		Reported :	04/13/2022

QUALITY CONTROL SECTION

Percent Moisture - Quality Control

Analyte	Result (% by Weight)	PQL (% by Weight)	MDL (% by Weight)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B2C1293 - No_Prep_WC1_S										
Duplicate (B2C1293-DUP1)			**Source: 2200401-01**			Prepared: 3/21/2022 Analyzed: 3/22/2022				
Percent Solids	93.4613	0.10	0.10		92.0116			1.56	30	

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Bianca Mintz
Irvine , CA 92612		Reported :	04/13/2022

Title 22 Metals by ICP-AES EPA 6010B - Quality Control

Analyte	Result (mg/kg dry)	PQL (mg/kg dry)	MDL (mg/kg dry)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B2C1253 - EPA 3050B_S										
Matrix Spike (B2C1253-MS1)			**Source: 2200381-01**			Prepared: 3/18/2022 Analyzed: 3/22/2022				
Antimony	27.3065	2.1	0.54	26.4880	8.63631	70.5	0 - 102			
Arsenic	26.1524	1.1	0.13	26.4880	4.08590	83.3	55 - 117			
Barium	257.458	1.1	0.12	26.4880	276.587	-72.2	11 - 177			M2
Beryllium	22.6392	1.1	0.03	26.4986	1.03697	81.5	64 - 115			
Cadmium	29.6710	1.1	0.15	26.4880	5.31766	91.9	62 - 116			
Chromium	123.342	1.1	0.27	26.4880	105.302	68.1	42 - 145			
Cobalt	33.1797	1.1	0.07	26.4880	10.6489	85.1	60 - 126			
Copper	173.803	2.1	0.20	26.4880	150.296	88.7	37 - 163			
Lead	140.477	1.1	0.19	26.4880	123.852	62.8	26 - 161			
Molybdenum	30.5176	1.1	0.13	26.4880	12.6145	67.6	31 - 122			
Nickel	62.6026	1.1	0.19	26.4880	41.5641	79.4	52 - 130			
Selenium	31.0743	1.1	0.43	26.4880	7.61114	88.6	25 - 129			
Silver	11.4260	1.1	0.12	13.2440	0.443175	82.9	48 - 133			
Thallium	19.0882	1.1	0.40	26.4880	ND	72.1	25 - 119			
Vanadium	52.1913	1.1	0.06	26.4880	31.2409	79.1	51 - 141			
Zinc	2777.98	11	1.6	26.4880	2807.54	-112	8 - 170			M2
Matrix Spike Dup (B2C1253-MSD1)			**Source: 2200381-01**			Prepared: 3/18/2022 Analyzed: 3/22/2022				
Antimony	27.8726	2.1	0.54	26.4880	8.63631	72.6	0 - 102	2.05	20	
Arsenic	24.8670	1.1	0.13	26.4880	4.08590	78.5	55 - 117	5.04	20	
Barium	259.402	1.1	0.12	26.4880	276.587	-64.9	11 - 177	0.753	20	M2
Beryllium	22.6446	1.1	0.03	26.4986	1.03697	81.5	64 - 115	0.0234	20	
Cadmium	29.3135	1.1	0.15	26.4880	5.31766	90.6	62 - 116	1.21	20	
Chromium	125.517	1.1	0.27	26.4880	105.302	76.3	42 - 145	1.75	20	
Cobalt	32.7328	1.1	0.07	26.4880	10.6489	83.4	60 - 126	1.36	20	
Copper	177.635	2.1	0.20	26.4880	150.296	103	37 - 163	2.18	20	
Lead	140.566	1.1	0.19	26.4880	123.852	63.1	26 - 161	0.0633	20	
Molybdenum	31.5142	1.1	0.13	26.4880	12.6145	71.4	31 - 122	3.21	20	
Nickel	62.1835	1.1	0.19	26.4880	41.5641	77.8	52 - 130	0.672	20	
Selenium	31.1043	1.1	0.43	26.4880	7.61114	88.7	25 - 129	0.0967	20	
Silver	10.7478	1.1	0.12	13.2440	0.443175	77.8	48 - 133	6.12	20	
Thallium	18.5289	1.1	0.40	26.4880	ND	70.0	25 - 119	2.97	20	
Vanadium	52.4740	1.1	0.06	26.4880	31.2409	80.2	51 - 141	0.540	20	
Zinc	2749.82	11	1.6	26.4880	2807.54	-218	8 - 170	1.02	20	M2

Certificate of Analysis

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19200 Von Karman Ave., Suite 800		Report To :	Bianca Mintz
Irvine , CA 92612		Reported :	04/13/2022

Title 22 Metals by ICP-AES EPA 6010B - Quality Control

Analyte	Result (mg/kg wet)	PQL (mg/kg wet)	MDL (mg/kg wet)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B2C1253 - EPA 3050B_S										
Blank (B2C1253-BLK1)						Prepared: 3/18/2022 Analyzed: 3/21/2022				
Antimony	ND	2.0	0.51							
Arsenic	ND	1.0	0.12							
Barium	ND	1.0	0.12							
Beryllium	ND	1.0	0.03							
Cadmium	ND	1.0	0.14							
Chromium	ND	1.0	0.26							
Cobalt	ND	1.0	0.07							
Copper	ND	2.0	0.19							
Lead	ND	1.0	0.18							
Molybdenum	ND	1.0	0.12							
Nickel	ND	1.0	0.18							
Selenium	ND	1.0	0.40							
Silver	ND	1.0	0.12							
Thallium	ND	1.0	0.38							
Vanadium	ND	1.0	0.06							
Zinc	ND	1.0	0.15							
LCS (B2C1253-BS1)						Prepared: 3/18/2022 Analyzed: 3/21/2022				
Antimony	25.8273	2.0	0.51	25.0000		103	80 - 120			
Arsenic	26.0528	1.0	0.12	25.0000		104	80 - 120			
Barium	26.0989	1.0	0.12	25.0000		104	80 - 120			
Beryllium	25.6420	1.0	0.03	25.0100		103	80 - 120			
Cadmium	26.8541	1.0	0.14	25.0000		107	80 - 120			
Chromium	26.2236	1.0	0.26	25.0000		105	80 - 120			
Cobalt	26.1990	1.0	0.07	25.0000		105	80 - 120			
Copper	24.8564	2.0	0.19	25.0000		99.4	80 - 120			
Lead	26.6098	1.0	0.18	25.0000		106	80 - 120			
Molybdenum	27.2114	1.0	0.12	25.0000		109	80 - 120			
Nickel	24.8660	1.0	0.18	25.0000		99.5	80 - 120			
Selenium	26.5858	1.0	0.40	25.0000		106	80 - 120			
Silver	11.5891	1.0	0.12	12.5000		92.7	80 - 120			
Thallium	26.3903	1.0	0.38	25.0000		106	80 - 120			
Vanadium	24.7790	1.0	0.06	25.0000		99.1	80 - 120			
Zinc	26.2680	1.0	0.15	25.0000		105	80 - 120			

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Irvine , CA 92612		Reported :	04/13/2022

Hexavalent Chromium by EPA 7196A/3060A - Quality Control

Analyte	Result (mg/kg dry)	PQL (mg/kg dry)	MDL (mg/kg dry)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B2C1285 - EPA 3060A_S (WC)										
Matrix Spike (B2C1285-MS1)			**Source: 2200401-01**			Prepared: 3/21/2022 Analyzed: 3/21/2022				
Hexavalent Chromium	23.9100	1.1	0.42	54.3410	ND	44.0	75 - 125			M1
Matrix Spike (B2C1285-MS2)			**Source: 2200401-01**			Prepared: 3/21/2022 Analyzed: 3/21/2022				
Hexavalent Chromium	2217.11	54	21	2394.22	ND	92.6	75 - 125			
Matrix Spike Dup (B2C1285-MSD1)			**Source: 2200401-01**			Prepared: 3/21/2022 Analyzed: 3/21/2022				
Hexavalent Chromium	50.8632	1.1	0.42	54.3410	ND	93.6	75 - 125	72.1	20	R3

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Hexavalent Chromium by EPA 7196A/3060A - Quality Control

Analyte	Result (mg/kg wet)	PQL (mg/kg wet)	MDL (mg/kg wet)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B2C1285 - EPA 3060A_S (WC)										
Blank (B2C1285-BLK1)						Prepared: 3/21/2022 Analyzed: 3/21/2022				
Hexavalent Chromium	ND	1.0	0.39							
LCS (B2C1285-BS1)						Prepared: 3/21/2022 Analyzed: 3/21/2022				
Hexavalent Chromium	46.0000	1.0	0.39	50.0000		92.0	80 - 120			

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Irvine , CA 92612		Reported :	04/13/2022

Mercury by AA (Cold Vapor) EPA 7471A - Quality Control

Analyte	Result (mg/kg dry)	PQL (mg/kg dry)	MDL (mg/kg dry)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B2C1238 - EPA 7471_S										
Matrix Spike (B2C1238-MS1)			**Source: 2200381-01**			Prepared: 3/17/2022 Analyzed: 3/18/2022				
Mercury	0.303861	0.11	0.01	0.441467	0.084869	49.6	70 - 130			M2
Matrix Spike Dup (B2C1238-MSD1)			**Source: 2200381-01**			Prepared: 3/17/2022 Analyzed: 3/18/2022				
Mercury	0.300914	0.11	0.01	0.441467	0.084869	48.9	70 - 130	0.975	20	M2

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Irvine , CA 92612		Reported :	04/13/2022

Mercury by AA (Cold Vapor) EPA 7471A - Quality Control

Analyte	Result (mg/kg wet)	PQL (mg/kg wet)	MDL (mg/kg wet)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B2C1238 - EPA 7471_S										
Blank (B2C1238-BLK1)						Prepared: 3/17/2022 Analyzed: 3/18/2022				
Mercury	ND	0.10	0.01							
LCS (B2C1238-BS1)						Prepared: 3/17/2022 Analyzed: 3/18/2022				
Mercury	0.407148	0.10	0.01	0.416667		97.7	80 - 120			

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Irvine , CA 92612		Reported :	04/13/2022

Mercury by AA (Cold Vapor) EPA 7471A - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B2C1238 - EPA 7471_S									
Post Spike (B2C1238-PS1)			**Source: 2200381-01**		Prepared: 3/17/2022 Analyzed: 3/18/2022				
Mercury	0.005629		5.00000E-3	0.000961	93.4	85 - 115			

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19200 Von Karman Ave., Suite 800		Report To :	Bianca Mintz
Irvine , CA 92612		Reported :	04/13/2022

Diesel and Oil Range Organics by EPA 8015B - Quality Control

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B2C1262 - GCSEMI_DRO_S										
Blank (B2C1262-BLK1)						Prepared: 3/18/2022 Analyzed: 3/19/2022				
DRO	ND	10	3.6							
ORO	ND	10	3.6							
Surrogate: p-Terphenyl	*67.46*			*80.0000*		*84.3*	*62 - 141*			
LCS (B2C1262-BS1)						Prepared: 3/18/2022 Analyzed: 3/19/2022				
DRO	1037.61	10	3.6	1000.00		104	56 - 139			
Surrogate: p-Terphenyl	*75.60*			*80.0000*		*94.5*	*62 - 141*			
Matrix Spike (B2C1262-MS1)			**Source: 2200380-43**			Prepared: 3/18/2022 Analyzed: 3/19/2022				
DRO	645.464	10	3.6	1000.00	34.0610	61.1	38 - 161			
Surrogate: p-Terphenyl	*70.56*			*80.0000*		*88.2*	*62 - 141*			
Matrix Spike Dup (B2C1262-MSD1)			**Source: 2200380-43**			Prepared: 3/18/2022 Analyzed: 3/19/2022				
DRO	629.808	10	3.6	1000.00	34.0610	59.6	38 - 161	2.46	20	
Surrogate: p-Terphenyl	*70.54*			*80.0000*		*88.2*	*62 - 141*			

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GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Bianca Mintz
Irvine , CA 92612		Reported :	04/13/2022

Polychlorinated Biphenyls by EPA 8082 - Quality Control

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	MDL (ug/kg dry)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B2C1240 - GCSEMI_PCB/PEST_S										
Matrix Spike (B2C1240-MS1)			**Source: 2200381-01**			Prepared: 3/17/2022 Analyzed: 3/18/2022				
Aroclor 1016	55.0135	17	2.1	176.587	ND	31.2	0 - 135			
Aroclor 1260	47.3526	17	2.1	176.587	ND	26.8	0 - 127			
Surrogate: Decachlorobiphenyl	*3.426*			*17.6587*		*19.4*	*0 - 87*			
Surrogate: Tetrachloro-m-xylene	*3.796*			*17.6587*		*21.5*	*0 - 103*			
Matrix Spike Dup (B2C1240-MSD1)			**Source: 2200381-01**			Prepared: 3/17/2022 Analyzed: 3/18/2022				
Aroclor 1016	59.5643	17	2.1	176.587	ND	33.7	0 - 135	7.94	20	
Aroclor 1260	49.1761	17	2.1	176.587	ND	27.8	0 - 127	3.78	20	
Surrogate: Decachlorobiphenyl	*3.324*			*17.6587*		*18.8*	*0 - 87*			
Surrogate: Tetrachloro-m-xylene	*3.672*			*17.6587*		*20.8*	*0 - 103*			

Certificate of Analysis

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Irvine , CA 92612		Reported :	04/13/2022

Polychlorinated Biphenyls by EPA 8082 - Quality Control

Analyte	Result (ug/kg wet)	PQL (ug/kg wet)	MDL (ug/kg wet)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B2C1240 - GCSEMI_PCB/PEST_S										
Blank (B2C1240-BLK1)						Prepared: 3/17/2022 Analyzed: 3/18/2022				
Aroclor 1016	ND	16	1.9							
Aroclor 1221	ND	16	1.9							
Aroclor 1232	ND	16	1.9							
Aroclor 1242	ND	16	1.9							
Aroclor 1248	ND	16	1.9							
Aroclor 1254	ND	16	1.9							
Aroclor 1260	ND	16	1.9							
Surrogate: Decachlorobiphenyl	*9.415*			*16.6667*		*56.5*	*0 - 87*			
Surrogate: Tetrachloro-m-xylene	*10.42*			*16.6667*		*62.5*	*0 - 103*			
LCS (B2C1240-BS1)						Prepared: 3/17/2022 Analyzed: 3/18/2022				
Aroclor 1016	120.221	16	1.9	166.667		72.1	11 - 108			
Aroclor 1260	129.415	16	1.9	166.667		77.6	19 - 112			
Surrogate: Decachlorobiphenyl	*10.45*			*16.6667*		*62.7*	*0 - 87*			
Surrogate: Tetrachloro-m-xylene	*11.33*			*16.6667*		*68.0*	*0 - 103*			

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Irvine , CA 92612		Reported :	04/13/2022

Polychlorinated Biphenyls by EPA 8082 - Quality Control

Analyte	Result (ug/kg wet)	PQL (ug/kg wet)	MDL (ug/kg wet)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B2C1264 - GCSEMI_PCB/PEST_S										
Blank (B2C1264-BLK1)						Prepared: 3/18/2022 Analyzed: 3/22/2022				
Aroclor 1016	ND	16	1.9							
Aroclor 1221	ND	16	1.9							
Aroclor 1232	ND	16	1.9							
Aroclor 1242	ND	16	1.9							
Aroclor 1248	ND	16	1.9							
Aroclor 1254	ND	16	1.9							
Aroclor 1260	ND	16	1.9							
Surrogate: Decachlorobiphenyl	*8.127*			*16.6667*		*48.8*	*0 - 87*			
Surrogate: Tetrachloro-m-xylene	*9.153*			*16.6667*		*54.9*	*0 - 103*			
LCS (B2C1264-BS1)						Prepared: 3/18/2022 Analyzed: 3/22/2022				
Aroclor 1016	117.854	16	1.9	166.667		70.7	11 - 108			
Aroclor 1260	125.666	16	1.9	166.667		75.4	19 - 112			
Surrogate: Decachlorobiphenyl	*9.312*			*16.6667*		*55.9*	*0 - 87*			
Surrogate: Tetrachloro-m-xylene	*10.77*			*16.6667*		*64.6*	*0 - 103*			
Matrix Spike (B2C1264-MS1)			**Source: 2200312-03**			Prepared: 3/18/2022 Analyzed: 3/22/2022				
Aroclor 1016	97.8350	16	1.9	166.667	ND	58.7	0 - 135			
Aroclor 1260	106.650	16	1.9	166.667	ND	64.0	0 - 127			
Surrogate: Decachlorobiphenyl	*7.896*			*16.6667*		*47.4*	*0 - 87*			
Surrogate: Tetrachloro-m-xylene	*8.242*			*16.6667*		*49.5*	*0 - 103*			
Matrix Spike Dup (B2C1264-MSD1)			**Source: 2200312-03**			Prepared: 3/18/2022 Analyzed: 3/22/2022				
Aroclor 1016	89.1663	16	1.9	166.667	ND	53.5	0 - 135	9.27	20	
Aroclor 1260	100.497	16	1.9	166.667	ND	60.3	0 - 127	5.94	20	
Surrogate: Decachlorobiphenyl	*7.572*			*16.6667*		*45.4*	*0 - 87*			
Surrogate: Tetrachloro-m-xylene	*7.765*			*16.6667*		*46.6*	*0 - 103*			

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Bianca Mintz
Irvine , CA 92612		Reported :	04/13/2022

Semivolatile Organic Compounds by EPA 8270C - Quality Control

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	MDL (ug/kg dry)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B2C1254 - MSSEMI_NAL										
Matrix Spike (B2C1254-MS1)		**Source: 2200381-02**			Prepared: 3/18/2022 Analyzed: 3/22/2022					
1,2,4-Trichlorobenzene	ND	33000	5000	6723.13	ND	NR	35 - 113			M6
1,2-Dichlorobenzene	ND	33000	2600	6723.13	ND	NR	32 - 102			M6
1,3-Dichlorobenzene	ND	33000	2800	6723.13	ND	NR	32 - 100			M6
1,4-Dichlorobenzene	ND	33000	2700	6723.13	ND	NR	33 - 97			M6
2,4,5-Trichlorophenol	ND	33000	3000	6723.13	ND	NR	36 - 124			M6
2,4,6-Trichlorophenol	ND	33000	3500	6723.13	ND	NR	37 - 130			M6
2,4-Dichlorophenol	ND	170000	3400	6723.13	ND	NR	32 - 130			M6
2,4-Dimethylphenol	ND	33000	2600	6723.13	ND	NR	30 - 128			M6
2,4-Dinitrophenol	ND	170000	8700	6723.13	ND	NR	0 - 203			
2,4-Dinitrotoluene	ND	33000	3400	6723.13	ND	NR	21 - 168			M6
2,6-Dinitrotoluene	ND	33000	4900	6723.13	ND	NR	31 - 152			M6
2-Chloronaphthalene	ND	33000	2800	6723.13	ND	NR	33 - 130			M6
2-Chlorophenol	ND	33000	3100	6723.13	ND	NR	32 - 106			M6
2-Methylnaphthalene	ND	33000	2700	6723.13	ND	NR	33 - 125			M6
2-Methylphenol	ND	33000	3600	6723.13	ND	NR	34 - 96			M6
2-Nitroaniline	ND	170000	4300	6723.13	ND	NR	30 - 146			M6
2-Nitrophenol	ND	33000	4500	6723.13	ND	NR	22 - 125			M6
3,3´-Dichlorobenzidine	ND	67000	28000	6723.13	ND	NR	19 - 144			M6
3-Nitroaniline	ND	170000	4900	6723.13	ND	NR	36 - 133			M6
4,6-Dinitro-2-methyphenol	ND	170000	4200	6723.13	ND	NR	0 - 196			
4-Bromophenyl-phenylether	ND	33000	6400	6723.13	ND	NR	41 - 121			M6
4-Chloro-3-methylphenol	ND	67000	7200	6723.13	ND	NR	39 - 134			M6
4-Chloroaniline	ND	67000	5300	6723.13	ND	NR	37 - 115			M6
4-Chlorophenyl-phenylether	ND	33000	3400	6723.13	ND	NR	34 - 133			M6
4-Methylphenol	ND	33000	5700	3361.56	ND	NR	34 - 121			M6
4-Nitroaniline	ND	170000	3800	6723.13	ND	NR	30 - 138			M6
4-Nitrophenol	ND	33000	6400	6723.13	ND	NR	5 - 154			M6
Acenaphthene	ND	33000	4300	6723.13	ND	NR	33 - 121			M6
Acenaphthylene	ND	33000	6200	6723.13	ND	NR	35 - 120			M6
Anthracene	ND	33000	5200	6723.13	ND	NR	28 - 133			M6
Benzidine (M)	ND	170000	140000	6723.13	ND	NR	8 - 175			M6
Benzo(a)anthracene	ND	33000	4400	6723.13	ND	NR	32 - 127			M6
Benzo(a)pyrene	ND	33000	6400	6723.13	ND	NR	35 - 127			M6
Benzo(b)fluoranthene	ND	33000	6500	6723.13	ND	NR	29 - 126			M6
Benzo(g,h,i)perylene	ND	33000	8200	6723.13	ND	NR	26 - 129			M6
Benzo(k)fluoranthene	ND	33000	3300	6723.13	ND	NR	36 - 120			M6
Benzoic acid	ND	170000	90000	6723.13	ND	NR	0 - 208			
Benzyl alcohol	7462.67	67000	3200	6723.13	ND	111	32 - 120			
bis(2-chloroethoxy)methane	ND	33000	6500	6723.13	ND	NR	34 - 108			M6
bis(2-Chloroethyl)ether	ND	33000	6700	6723.13	ND	NR	34 - 100			M6
bis(2-chloroisopropyl)ether	ND	33000	7700	6723.13	ND	NR	21 - 111			M6
bis(2-ethylhexyl)phthalate	11160.4	33000	6300	6723.13	14522.0	-50.0	39 - 131			M6
Butylbenzylphthalate	ND	33000	4200	6723.13	ND	NR	39 - 129			M6
Chrysene	ND	33000	8500	6723.13	ND	NR	33 - 126			M6
Di-n-butylphthalate	ND	33000	5100	6723.13	ND	NR	42 - 122			M6

Certificate of Analysis

GSI Environmental, Inc.	Project Number : SATI / 6013
19200 Von Karman Ave., Suite 800	Report To : Bianca Mintz
Irvine , CA 92612	Reported : 04/13/2022

Semivolatile Organic Compounds by EPA 8270C - Quality Control (cont'd)

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	MDL (ug/kg dry)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B2C1254 - MSSEMI_NAL (continued)										
Matrix Spike (B2C1254-MS1) - Continued		**Source: 2200381-02**			Prepared: 3/18/2022 Analyzed: 3/22/2022					
Di-n-octylphthalate	ND	33000	6300	6723.13	ND	NR	30 - 147			M6
Dibenz(a,h)anthracene	ND	33000	4500	6723.13	ND	NR	30 - 126			M6
Dibenzofuran	ND	33000	5800	6723.13	ND	NR	36 - 133			M6
Diethyl phthalate	ND	33000	5900	6723.13	ND	NR	28 - 139			M6
Dimethyl phthalate	ND	33000	4100	6723.13	ND	NR	32 - 129			M6
Fluoranthene	ND	33000	6100	6723.13	ND	NR	23 - 140			M6
Fluorene	ND	33000	11000	6723.13	ND	NR	32 - 130			M6
Hexachlorobenzene	ND	33000	5500	6723.13	ND	NR	27 - 148			M6
Hexachlorobutadiene	ND	67000	5300	6723.13	ND	NR	29 - 112			M6
Hexachlorocyclopentadiene	ND	67000	7000	6723.13	ND	NR	13 - 147			M6
Hexachloroethane	ND	33000	9400	6723.13	ND	NR	31 - 104			M6
Indeno(1,2,3-cd)pyrene	ND	33000	7600	6723.13	ND	NR	21 - 137			M6
Isophorone	ND	33000	8500	6723.13	ND	NR	34 - 112			M6
N-Nitroso-di-n propylamine	ND	33000	6100	6723.13	ND	NR	36 - 115			M6
N-Nitrosodiphenylamine	ND	33000	3200	6723.13	ND	NR	40 - 120			M6
Naphthalene	ND	33000	5600	6723.13	ND	NR	33 - 108			M6
Nitrobenzene	ND	33000	5700	6723.13	ND	NR	32 - 122			M6
Pentachlorophenol	ND	170000	5000	6723.13	ND	NR	0 - 151			
Phenanthrene	ND	33000	6700	6723.13	ND	NR	40 - 122			M6
Phenol	ND	33000	3400	6723.13	ND	NR	35 - 112			M6
Pyrene	ND	33000	7300	6723.13	ND	NR	28 - 132			M6
Pyridine	ND	170000	27000	6723.13	ND	NR	5 - 107			M6
Surrogate: 1,2-Dichlorobenzene-d4	*2353*			*6723.13*		*35.0*	*23 - 102*			
Surrogate: 2,4,6-Tribromophenol	*0.000*			*10084.7*		*NR*	*3 - 138*			S4
Surrogate: 2-Chlorophenol-d4	*2488*			*10084.7*		*24.7*	*18 - 105*			
Surrogate: 2-Fluorobiphenyl	*3227*			*6723.13*		*48.0*	*34 - 106*			
Surrogate: 2-Fluorophenol	*0.000*			*10084.7*		*NR*	*16 - 94*			S4
Surrogate: 4-Terphenyl-d14	*4034*			*6723.13*		*60.0*	*31 - 130*			
Surrogate: Nitrobenzene-d5	*2689*			*6723.13*		*40.0*	*23 - 102*			
Surrogate: Phenol-d6	*1815*			*10084.7*		*18.0*	*14 - 104*			
Matrix Spike Dup (B2C1254-MSD1)		**Source: 2200381-02**			Prepared: 3/18/2022 Analyzed: 3/22/2022					
1,2,4-Trichlorobenzene	ND	33000	5000	6723.13	ND	NR	35 - 113	NR	20	M6
1,2-Dichlorobenzene	ND	33000	2600	6723.13	ND	NR	32 - 102	NR	20	M6
1,3-Dichlorobenzene	ND	33000	2800	6723.13	ND	NR	32 - 100	NR	20	M6
1,4-Dichlorobenzene	ND	33000	2700	6723.13	ND	NR	33 - 97	NR	20	M6
2,4,5-Trichlorophenol	ND	33000	3000	6723.13	ND	NR	36 - 124	NR	20	M6
2,4,6-Trichlorophenol	ND	33000	3500	6723.13	ND	NR	37 - 130	NR	20	M6
2,4-Dichlorophenol	ND	170000	3400	6723.13	ND	NR	32 - 130	NR	20	M6
2,4-Dimethylphenol	ND	33000	2600	6723.13	ND	NR	30 - 128	NR	20	M6
2,4-Dinitrophenol	ND	170000	8700	6723.13	ND	NR	0 - 203	NR	20	
2,4-Dinitrotoluene	ND	33000	3400	6723.13	ND	NR	21 - 168	NR	20	M6
2,6-Dinitrotoluene	ND	33000	4900	6723.13	ND	NR	31 - 152	NR	20	M6
2-Chloronaphthalene	ND	33000	2800	6723.13	ND	NR	33 - 130	NR	20	M6
2-Chlorophenol	ND	33000	3100	6723.13	ND	NR	32 - 106	NR	20	M6

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Bianca Mintz
Irvine , CA 92612		Reported :	04/13/2022

Semivolatile Organic Compounds by EPA 8270C - Quality Control (cont'd)

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	MDL (ug/kg dry)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B2C1254 - MSSEMI_NAL (continued)										
Matrix Spike Dup (B2C1254-MSD1) - Continued		**Source: 2200381-02**			Prepared: 3/18/2022 Analyzed: 3/22/2022					
2-Methylnaphthalene	ND	33000	2700	6723.13	ND	NR	33 - 125	NR	20	M6
2-Methylphenol	ND	33000	3600	6723.13	ND	NR	34 - 96	NR	20	M6
2-Nitroaniline	ND	170000	4300	6723.13	ND	NR	30 - 146	NR	20	M6
2-Nitrophenol	ND	33000	4500	6723.13	ND	NR	22 - 125	NR	20	M6
3,3´-Dichlorobenzidine	ND	67000	28000	6723.13	ND	NR	19 - 144	NR	20	M6
3-Nitroaniline	ND	170000	4900	6723.13	ND	NR	36 - 133	NR	20	M6
4,6-Dinitro-2-methyphenol	ND	170000	4200	6723.13	ND	NR	0 - 196	NR	20	
4-Bromophenyl-phenylether	ND	33000	6400	6723.13	ND	NR	41 - 121	NR	20	M6
4-Chloro-3-methylphenol	ND	67000	7200	6723.13	ND	NR	39 - 134	NR	20	M6
4-Chloroaniline	ND	67000	5300	6723.13	ND	NR	37 - 115	NR	20	M6
4-Chlorophenyl-phenylether	ND	33000	3400	6723.13	ND	NR	34 - 133	NR	20	M6
4-Methylphenol	ND	33000	5700	3361.56	ND	NR	34 - 121	NR	20	M6
4-Nitroaniline	ND	170000	3800	6723.13	ND	NR	30 - 138	NR	20	M6
4-Nitrophenol	ND	33000	6400	6723.13	ND	NR	5 - 154	NR	20	M6
Acenaphthene	ND	33000	4300	6723.13	ND	NR	33 - 121	NR	20	M6
Acenaphthylene	ND	33000	6200	6723.13	ND	NR	35 - 120	NR	20	M6
Anthracene	ND	33000	5200	6723.13	ND	NR	28 - 133	NR	20	M6
Benzidine (M)	ND	170000	140000	6723.13	ND	NR	8 - 175	NR	20	M6
Benzo(a)anthracene	ND	33000	4400	6723.13	ND	NR	32 - 127	NR	20	M6
Benzo(a)pyrene	ND	33000	6400	6723.13	ND	NR	35 - 127	NR	20	M6
Benzo(b)fluoranthene	ND	33000	6500	6723.13	ND	NR	29 - 126	NR	20	M6
Benzo(g,h,i)perylene	ND	33000	8200	6723.13	ND	NR	26 - 129	NR	20	M6
Benzo(k)fluoranthene	ND	33000	3300	6723.13	ND	NR	36 - 120	NR	20	M6
Benzoic acid	ND	170000	90000	6723.13	ND	NR	0 - 208	NR	20	
Benzyl alcohol	ND	67000	3200	6723.13	ND	NR	32 - 120	NR	20	M6
bis(2-chloroethoxy)methane	ND	33000	6500	6723.13	ND	NR	34 - 108	NR	20	M6
bis(2-Chloroethyl)ether	ND	33000	6700	6723.13	ND	NR	34 - 100	NR	20	M6
bis(2-chloroisopropyl)ether	ND	33000	7700	6723.13	ND	NR	21 - 111	NR	20	M6
bis(2-ethylhexyl)phthalate	9008.99	33000	6300	6723.13	14522.0	-82.0	39 - 131	21.3	20	M6
Butylbenzylphthalate	ND	33000	4200	6723.13	ND	NR	39 - 129	NR	20	M6
Chrysene	ND	33000	8500	6723.13	ND	NR	33 - 126	NR	20	M6
Di-n-butylphthalate	ND	33000	5100	6723.13	ND	NR	42 - 122	NR	20	M6
Di-n-octylphthalate	ND	33000	6300	6723.13	ND	NR	30 - 147	NR	20	M6
Dibenz(a,h)anthracene	ND	33000	4500	6723.13	ND	NR	30 - 126	NR	20	M6
Dibenzofuran	ND	33000	5800	6723.13	ND	NR	36 - 133	NR	20	M6
Diethyl phthalate	ND	33000	5900	6723.13	ND	NR	28 - 139	NR	20	M6
Dimethyl phthalate	ND	33000	4100	6723.13	ND	NR	32 - 129	NR	20	M6
Fluoranthene	ND	33000	6100	6723.13	ND	NR	23 - 140	NR	20	M6
Fluorene	ND	33000	11000	6723.13	ND	NR	32 - 130	NR	20	M6
Hexachlorobenzene	ND	33000	5500	6723.13	ND	NR	27 - 148	NR	20	M6
Hexachlorobutadiene	ND	67000	5300	6723.13	ND	NR	29 - 112	NR	20	M6
Hexachlorocyclopentadiene	ND	67000	7000	6723.13	ND	NR	13 - 147	NR	20	M6
Hexachloroethane	ND	33000	9400	6723.13	ND	NR	31 - 104	NR	20	M6
Indeno(1,2,3-cd)pyrene	ND	33000	7600	6723.13	ND	NR	21 - 137	NR	20	M6
Isophorone	ND	33000	8500	6723.13	ND	NR	34 - 112	NR	20	M6

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Bianca Mintz
Irvine , CA 92612		Reported :	04/13/2022

Semivolatile Organic Compounds by EPA 8270C - Quality Control (cont'd)

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	MDL (ug/kg dry)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B2C1254 - MSSEMI_NAL (continued)										
Matrix Spike Dup (B2C1254-MSD1) - Continued		**Source: 2200381-02**				Prepared: 3/18/2022 Analyzed: 3/22/2022				
N-Nitroso-di-n propylamine	ND	33000	6100	6723.13	ND	NR	36 - 115	NR	20	M6
N-Nitrosodiphenylamine	ND	33000	3200	6723.13	ND	NR	40 - 120	NR	20	M6
Naphthalene	ND	33000	5600	6723.13	ND	NR	33 - 108	NR	20	M6
Nitrobenzene	ND	33000	5700	6723.13	ND	NR	32 - 122	NR	20	M6
Pentachlorophenol	ND	170000	5000	6723.13	ND	NR	0 - 151	NR	20	
Phenanthrene	ND	33000	6700	6723.13	ND	NR	40 - 122	NR	20	M6
Phenol	ND	33000	3400	6723.13	ND	NR	35 - 112	NR	20	M6
Pyrene	ND	33000	7300	6723.13	ND	NR	28 - 132	NR	20	M6
Pyridine	ND	170000	27000	6723.13	ND	NR	5 - 107	NR	20	M6
Surrogate: 1,2-Dichlorobenzene-d4	*2622*			*6723.13*		*39.0*	*23 - 102*			
Surrogate: 2,4,6-Tribromophenol	*0.000*			*10084.7*		*NR*	*3 - 138*			S4
Surrogate: 2-Chlorophenol-d4	*3025*			*10084.7*		*30.0*	*18 - 105*			
Surrogate: 2-Fluorobiphenyl	*3832*			*6723.13*		*57.0*	*34 - 106*			
Surrogate: 2-Fluorophenol	*0.000*			*10084.7*		*NR*	*16 - 94*			S4
Surrogate: 4-Terphenyl-d14	*3563*			*6723.13*		*53.0*	*31 - 130*			
Surrogate: Nitrobenzene-d5	*1815*			*6723.13*		*27.0*	*23 - 102*			
Surrogate: Phenol-d6	*1614*			*10084.7*		*16.0*	*14 - 104*			

Certificate of Analysis

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Semivolatile Organic Compounds by EPA 8270C - Quality Control

Analyte	Result (ug/kg wet)	PQL (ug/kg wet)	MDL (ug/kg wet)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B2C1254 - MSSEMI_NAL										
Blank (B2C1254-BLK1)							Prepared: 3/18/2022 Analyzed: 3/22/2022			
1,2,4-Trichlorobenzene	ND	330	50							
1,2-Dichlorobenzene	ND	330	26							
1,3-Dichlorobenzene	ND	330	27							
1,4-Dichlorobenzene	ND	330	27							
2,4,5-Trichlorophenol	ND	330	30							
2,4,6-Trichlorophenol	ND	330	35							
2,4-Dichlorophenol	ND	1600	34							
2,4-Dimethylphenol	ND	330	26							
2,4-Dinitrophenol	ND	1600	86							
2,4-Dinitrotoluene	ND	330	33							
2,6-Dinitrotoluene	ND	330	49							
2-Chloronaphthalene	ND	330	28							
2-Chlorophenol	ND	330	31							
2-Methylnaphthalene	ND	330	27							
2-Methylphenol	ND	330	36							
2-Nitroaniline	ND	1600	43							
2-Nitrophenol	ND	330	45							
3,3´-Dichlorobenzidine	ND	660	280							
3-Nitroaniline	ND	1600	49							
4,6-Dinitro-2-methyphenol	ND	1600	41							
4-Bromophenyl-phenylether	ND	330	64							
4-Chloro-3-methylphenol	ND	660	71							
4-Chloroaniline	ND	660	53							
4-Chlorophenyl-phenylether	ND	330	33							
4-Methylphenol	ND	330	57							
4-Nitroaniline	ND	1600	37							
4-Nitrophenol	ND	330	64							
Acenaphthene	ND	330	43							
Acenaphthylene	ND	330	62							
Anthracene	ND	330	51							
Benzidine (M)	ND	1600	1400							
Benzo(a)anthracene	ND	330	44							
Benzo(a)pyrene	ND	330	64							
Benzo(b)fluoranthene	ND	330	65							
Benzo(g,h,i)perylene	ND	330	81							
Benzo(k)fluoranthene	ND	330	33							
Benzoic acid	ND	1600	890							
Benzyl alcohol	ND	660	32							
bis(2-chloroethoxy)methane	ND	330	64							
bis(2-Chloroethyl)ether	ND	330	66							
bis(2-chloroisopropyl)ether	ND	330	76							
bis(2-ethylhexyl)phthalate	ND	330	63							
Butylbenzylphthalate	ND	330	41							
Chrysene	ND	330	84							
Di-n-butylphthalate	ND	330	51							

Certificate of Analysis

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19200 Von Karman Ave., Suite 800		Report To :	Bianca Mintz
Irvine , CA 92612		Reported :	04/13/2022

Semivolatile Organic Compounds by EPA 8270C - Quality Control (cont'd)

Analyte	Result (ug/kg wet)	PQL (ug/kg wet)	MDL (ug/kg wet)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B2C1254 - MSSEMI_NAL (continued)										
Blank (B2C1254-BLK1) - Continued						Prepared: 3/18/2022 Analyzed: 3/22/2022				
Di-n-octylphthalate	ND	330	63							
Dibenz(a,h)anthracene	ND	330	45							
Dibenzofuran	ND	330	58							
Diethyl phthalate	ND	330	58							
Dimethyl phthalate	ND	330	40							
Fluoranthene	ND	330	60							
Fluorene	ND	330	110							
Hexachlorobenzene	ND	330	55							
Hexachlorobutadiene	ND	660	53							
Hexachlorocyclopentadiene	ND	660	70							
Hexachloroethane	ND	330	94							
Indeno(1,2,3-cd)pyrene	ND	330	75							
Isophorone	ND	330	85							
N-Nitroso-di-n propylamine	ND	330	60							
N-Nitrosodiphenylamine	ND	330	32							
Naphthalene	ND	330	56							
Nitrobenzene	ND	330	57							
Pentachlorophenol	ND	1600	50							
Phenanthrene	ND	330	67							
Phenol	ND	330	34							
Pyrene	ND	330	72							
Pyridine	ND	1600	270							
Surrogate: 1,2-Dichlorobenzene-d4	*1511*			*6666.67*		*22.7*	*23 - 102*			S11
Surrogate: 2,4,6-Tribromophenol	*3518*			*10000.0*		*35.2*	*3 - 138*			
Surrogate: 2-Chlorophenol-d4	*2355*			*10000.0*		*23.5*	*18 - 105*			
Surrogate: 2-Fluorobiphenyl	*2151*			*6666.67*		*32.3*	*34 - 106*			S11
Surrogate: 2-Fluorophenol	*1759*			*10000.0*		*17.6*	*16 - 94*			
Surrogate: 4-Terphenyl-d14	*4612*			*6666.67*		*69.2*	*31 - 130*			
Surrogate: Nitrobenzene-d5	*1907*			*6666.67*		*28.6*	*23 - 102*			
Surrogate: Phenol-d6	*2749*			*10000.0*		*27.5*	*14 - 104*			
LCS (B2C1254-BS1)						Prepared: 3/18/2022 Analyzed: 3/22/2022				
1,2,4-Trichlorobenzene	4752.00	330	50	6666.67		71.3	41 - 104			
1,2-Dichlorobenzene	4548.00	330	26	6666.67		68.2	37 - 100			
1,3-Dichlorobenzene	4432.00	330	27	6666.67		66.5	36 - 98			
1,4-Dichlorobenzene	4396.67	330	27	6666.67		65.9	37 - 97			
2,4,5-Trichlorophenol	5317.33	330	30	6666.67		79.8	47 - 115			
2,4,6-Trichlorophenol	5267.33	330	35	6666.67		79.0	48 - 119			
2,4-Dichlorophenol	5072.00	1600	34	6666.67		76.1	46 - 118			
2,4-Dimethylphenol	5973.33	330	26	6666.67		89.6	41 - 114			
2,4-Dinitrophenol	4844.00	1600	86	6666.67		72.7	0 - 180			
2,4-Dinitrotoluene	6128.67	330	33	6666.67		91.9	40 - 138			
2,6-Dinitrotoluene	5808.00	330	49	6666.67		87.1	45 - 131			
2-Chloronaphthalene	5366.67	330	28	6666.67		80.5	46 - 112			
2-Chlorophenol	5104.00	330	31	6666.67		76.6	41 - 99			

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Bianca Mintz
Irvine , CA 92612		Reported :	04/13/2022

Semivolatile Organic Compounds by EPA 8270C - Quality Control (cont'd)

Analyte	Result (ug/kg wet)	PQL (ug/kg wet)	MDL (ug/kg wet)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B2C1254 - MSSEMI_NAL (continued)										
LCS (B2C1254-BS1) - Continued						Prepared: 3/18/2022 Analyzed: 3/22/2022				
2-Methylnaphthalene	4902.67	330	27	6666.67		73.5	45 - 111			
2-Methylphenol	5603.33	330	36	6666.67		84.1	40 - 92			
2-Nitroaniline	6422.00	1600	43	6666.67		96.3	44 - 130			
2-Nitrophenol	5165.33	330	45	6666.67		77.5	34 - 114			
3,3´-Dichlorobenzidine	5182.67	660	280	6666.67		77.7	41 - 128			
3-Nitroaniline	6568.00	1600	49	6666.67		98.5	47 - 123			
4,6-Dinitro-2-methyphenol	6156.00	1600	41	6666.67		92.3	2 - 172			
4-Bromophenyl-phenylether	5504.00	330	64	6666.67		82.6	49 - 116			
4-Chloro-3-methylphenol	5673.33	660	71	6666.67		85.1	45 - 127			
4-Chloroaniline	5766.67	660	53	6666.67		86.5	50 - 106			
4-Chlorophenyl-phenylether	5294.67	330	33	6666.67		79.4	49 - 115			
4-Methylphenol	2857.33	330	57	3333.33		85.7	43 - 109			
4-Nitroaniline	5984.00	1600	37	6666.67		89.8	44 - 125			
4-Nitrophenol	5924.00	330	64	6666.67		88.9	30 - 146			
Acenaphthene	5551.33	330	43	6666.67		83.3	44 - 110			
Acenaphthylene	5576.67	330	62	6666.67		83.6	42 - 111			
Anthracene	6024.67	330	51	6666.67		90.4	41 - 117			
Benzidine (M)	3400.67	1600	1400	6666.67		51.0	0 - 189			
Benzo(a)anthracene	6111.33	330	44	6666.67		91.7	45 - 110			
Benzo(a)pyrene	6145.33	330	64	6666.67		92.2	45 - 116			
Benzo(b)fluoranthene	6120.00	330	65	6666.67		91.8	43 - 112			
Benzo(g,h,i)perylene	5866.00	330	81	6666.67		88.0	43 - 113			
Benzo(k)fluoranthene	6046.67	330	33	6666.67		90.7	42 - 114			
Benzoic acid	1578.00	1600	890	6666.67		23.7	0 - 134			
Benzyl alcohol	5936.67	660	32	6666.67		89.0	39 - 117			
bis(2-chloroethoxy)methane	5697.33	330	64	6666.67		85.5	43 - 102			
bis(2-Chloroethyl)ether	5452.00	330	66	6666.67		81.8	38 - 99			
bis(2-chloroisopropyl)ether	6092.00	330	76	6666.67		91.4	30 - 104			
bis(2-ethylhexyl)phthalate	6426.67	330	63	6666.67		96.4	49 - 123			
Butylbenzylphthalate	6402.67	330	41	6666.67		96.0	49 - 122			
Chrysene	6026.67	330	84	6666.67		90.4	46 - 111			
Di-n-butylphthalate	6220.00	330	51	6666.67		93.3	48 - 118			
Di-n-octylphthalate	6478.67	330	63	6666.67		97.2	46 - 131			
Dibenz(a,h)anthracene	6014.00	330	45	6666.67		90.2	43 - 113			
Dibenzofuran	5616.00	330	58	6666.67		84.2	50 - 113			
Diethyl phthalate	5632.67	330	58	6666.67		84.5	50 - 115			
Dimethyl phthalate	5472.67	330	40	6666.67		82.1	48 - 112			
Fluoranthene	5923.33	330	60	6666.67		88.8	40 - 119			
Fluorene	5378.00	330	110	6666.67		80.7	41 - 117			
Hexachlorobenzene	5396.67	330	55	6666.67		80.9	46 - 123			
Hexachlorobutadiene	3968.67	660	53	6666.67		59.5	37 - 104			
Hexachlorocyclopentadiene	4850.00	660	70	6666.67		72.8	30 - 128			
Hexachloroethane	4363.33	330	94	6666.67		65.4	38 - 103			
Indeno(1,2,3-cd)pyrene	6137.33	330	75	6666.67		92.1	43 - 113			
Isophorone	5853.33	330	85	6666.67		87.8	43 - 109			

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Bianca Mintz
Irvine , CA 92612		Reported :	04/13/2022

Semivolatile Organic Compounds by EPA 8270C - Quality Control (cont'd)

Analyte	Result (ug/kg wet)	PQL (ug/kg wet)	MDL (ug/kg wet)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B2C1254 - MSSEMI_NAL (continued)										
LCS (B2C1254-BS1) - Continued						Prepared: 3/18/2022 Analyzed: 3/22/2022				
N-Nitroso-di-n propylamine	5894.67	330	60	6666.67		88.4	44 - 111			
N-Nitrosodiphenylamine	6111.33	330	32	6666.67		91.7	48 - 113			
Naphthalene	4921.33	330	56	6666.67		73.8	38 - 103			
Nitrobenzene	5338.67	330	57	6666.67		80.1	40 - 111			
Pentachlorophenol	5754.00	1600	50	6666.67		86.3	33 - 130			
Phenanthrene	6041.33	330	67	6666.67		90.6	42 - 119			
Phenol	5852.00	330	34	6666.67		87.8	43 - 104			
Pyrene	6028.67	330	72	6666.67		90.4	38 - 120			
Pyridine	2734.00	1600	270	6666.67		41.0	0 - 72			
Surrogate: 1,2-Dichlorobenzene-d4	*4743*			*6666.67*		*71.1*	*23 - 102*			
Surrogate: 2,4,6-Tribromophenol	*7914*			*10000.0*		*79.1*	*3 - 138*			
Surrogate: 2-Chlorophenol-d4	*7816*			*10000.0*		*78.2*	*18 - 105*			
Surrogate: 2-Fluorobiphenyl	*5311*			*6666.67*		*79.7*	*34 - 106*			
Surrogate: 2-Fluorophenol	*7561*			*10000.0*		*75.6*	*16 - 94*			
Surrogate: 4-Terphenyl-d14	*5987*			*6666.67*		*89.8*	*31 - 130*			
Surrogate: Nitrobenzene-d5	*5311*			*6666.67*		*79.7*	*23 - 102*			
Surrogate: Phenol-d6	*8536*			*10000.0*		*85.4*	*14 - 104*			

GSI ENVIRONMENTAL

CHAIN-OF-CUSTODY RECORD
Date: 3/15/2022
Page 1 of

2200381

2.8°C

FROM: GSI Environmental Inc., 19200 Von Karman Ave, Suite 800, Irvine, CA 92612, (949) 679-1070	PROJECT NAME: SAT I
	PROJECT CONTACT: Bianca Mintz
	GLOBAL ID:
	PROJECT NO.: 6013
	LAB CONTACT: Christine Caballero
	SAMPLER(S): (PRINT) CSJ
TEL: (949) 679-1070	E-MAIL: bgmintz@gsi-net.com; tfwood@gsi-net.com
LABORATORY: Advanced Technology Lab	
TURNAROUND TIME: ☐ SAME DAY ☐ 24 HR ☐ 48 HR ☐ 72 HR ☐ 5 DAYS ☒ STANDARD	
SPECIAL INSTRUCTIONS: See email for method details	

REQUESTED ANALYSES

Please check box or fill in blank as needed.

LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	Unpreserved	Preserved	Field Filtered	Metals	Cr6	PCBs	PAHs	TPH	Dioxines	phthalates	polybrominate diphenyls	particle size
1	Sample 23	3/15/22	0750	Soil	3	X			X	X	X	X	X				
2	Sample 24		0755		3												
3	Sample 25		0900		3												
4	Sample 26		1005		3												
5	Sample 27		1010		3												
6	Sample 28		1015		6									X	X	X	X
7	Sample 29		1040		3												
8	Sample 30	3/15/22	1015		3	X			X	X	X	X	X				

Relinquished by: (Signature)	Received by: (Signature) ATL Ethan Tran	Date: 3-15-22	Time: 1500
Relinquished by: (Signature) ATL Ethan Tran	Received by: (Signature)	Date: 3/15/22	Time: 15:25
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:

Petroleum Services Division
3437 Landco Dr.
Bakersfield, California 93308
Tel: 661-325-5657
Fax: 661-325-5808
www.corelab.com

March 29, 2022

Jerald Ancheta
Advanced Technology Laboratories
3275 Walnut Ave
Signal Hill, CA 90755

Subject: Laser Particle Size Analysis
Project: 2200381
CL File No: 2201691

Dear Mr. Ancheta,

The attached file presents the final particle size determination results for the soil sample submitted from your Project #2200381.

Appropriate ASTM, EPA or API methodologies were used for this project and SOP's are available on request. The sample for this project is currently in storage and will be retained for thirty days past completion of testing at no charge. At the end of thirty days, the sample will be disposed. You may contact me regarding continued storage, disposal, or return of the sample.

Thank you for this opportunity to be of service to Advanced Technology Laboratories. Please do not hesitate to contact us at (661-325-5657) if you have any questions regarding these results or if we can be of any additional service.

Sincerely,
Core Laboratories LP

Chris Florence
Sr. Core Analyst

The analyses, opinions or interpretations contained in this report are based upon observations and material supplied by the client for whose exclusive and confidential use this report has been made. The interpretations or opinions expressed represent the best judgment of Core Laboratories. Core Laboratories assumes no responsibility and makes no warranty or representations, expressed or implied, as to the productivity, proper operations or profitableness, however, of any oil, gas, coal or other mineral, property, well or sand in connection with which such report is used or relied upon for any reason whatsoever.

SIEVE and LASER PARTICLE SIZE SUMMARY

(METHODOLOGY: ASTM D422/D4464M)

Petroleum Services

Company: Advanced Technology Laboratories
Project Number: 2200381

CL File No.: 2201691
Date: 3/29/2022

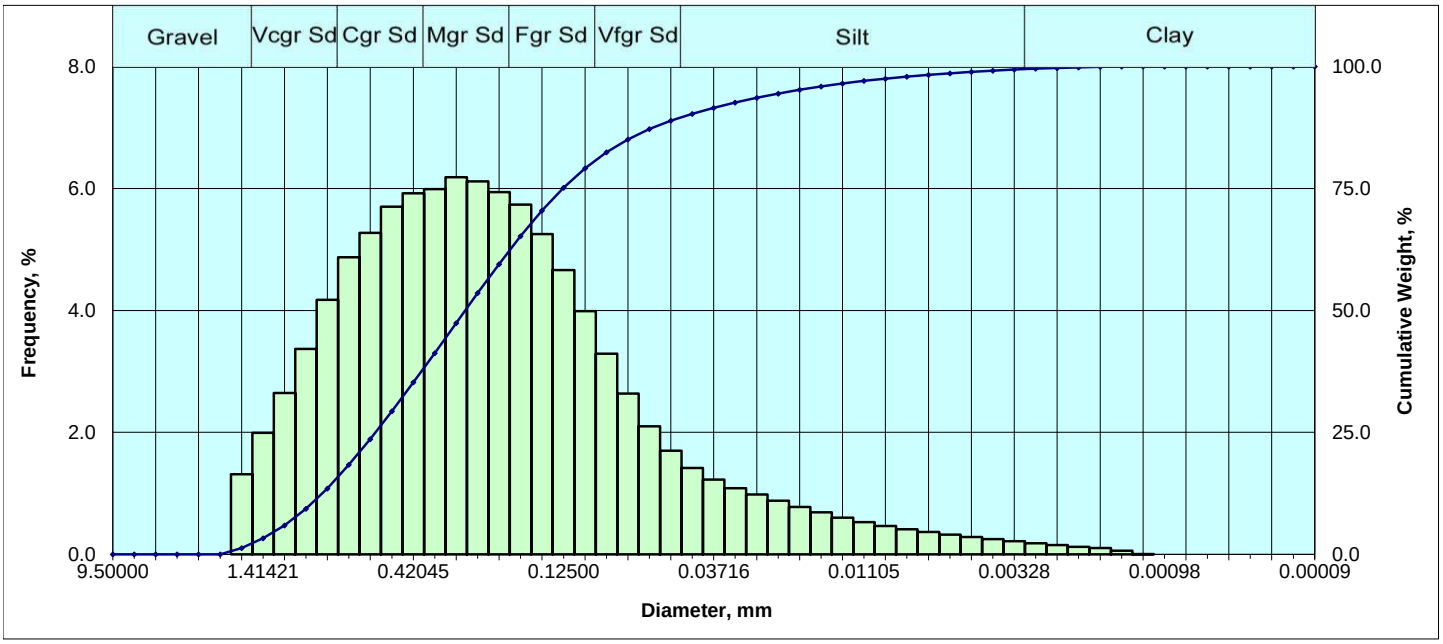
Sample ID	Grain Size Description** (Mean from Folk)	Median Grain Size, mm	Component Percentages								
			Gravel	Sand Size					Silt	Clay	Silt & Clay
				VCoarse	Coarse	Medium	Fine	VFine			
Sample 28	Medium Grain Sand	0.2776	0.00	9.33	20.02	24.22	21.60	12.01	11.99	0.83	12.82

**Wentworth Scale

Company: Advanced Technology Laboratories
Project Number: 2200381

CL File No.: 2201691
Sample ID: Sample 28

Sieve and Laser Particle Size Analysis



Particle Size Distribution						
	Diameter				Weight %	
	[US Mesh]	[in.]	[mm]	[ϕ]	[Incl.]	[Cum.]
Gravel	3/8 in.	0.375000	9.50000	-3.25	0.000	0.00
	1/4 in.	0.250000	6.35000	-2.67	0.000	0.00
	4	0.187008	4.75000	-2.25	0.000	0.00
	6	0.131890	3.35000	-1.75	0.000	0.00
	8	0.092913	2.36000	-1.25	0.000	0.00
	10	0.078740	2.00000	-1.00	0.000	0.00
V Crse Sand	12	0.066212	1.68179	-0.75	1.315	1.31
	14	0.055678	1.41421	-0.50	1.992	3.31
	16	0.046819	1.18921	-0.25	2.648	5.96
	18	0.039370	1.00000	0.00	3.370	9.33
Coarse Sand	20	0.033106	0.84090	0.25	4.176	13.50
	25	0.027839	0.70711	0.50	4.871	18.37
	30	0.023410	0.59460	0.75	5.273	23.65
	35	0.019685	0.50000	1.00	5.704	29.35
Medium Sand	40	0.016553	0.42045	1.25	5.922	35.27
	45	0.013919	0.35355	1.50	5.991	41.26
	50	0.011705	0.29730	1.75	6.184	47.45
	60	0.009843	0.25000	2.00	6.118	53.57
Fine Sand	70	0.008277	0.21022	2.25	5.943	59.51
	80	0.006960	0.17678	2.50	5.738	65.25
	100	0.005852	0.14865	2.75	5.251	70.50
	120	0.004921	0.12500	3.00	4.665	75.16
V. Fine Sand	140	0.004138	0.10511	3.25	3.988	79.15
	170	0.003480	0.08839	3.50	3.288	82.44
	200	0.002926	0.07433	3.75	2.638	85.08
	230	0.002461	0.06250	4.00	2.099	87.18
Silt	270	0.002069	0.05256	4.25	1.701	88.88
	325	0.001740	0.04419	4.50	1.419	90.30
	400	0.001463	0.03716	4.75	1.228	91.52
	450	0.001230	0.03125	5.00	1.087	92.61
	500	0.001035	0.02628	5.25	0.983	93.60
	635	0.000870	0.02210	5.50	0.878	94.47
		0.000732	0.01858	5.75	0.778	95.25
		0.000615	0.01562	6.00	0.688	95.94
		0.000517	0.01314	6.25	0.601	96.54
		0.000435	0.01105	6.50	0.526	97.07
		0.000366	0.00929	6.75	0.465	97.53
		0.000308	0.00781	7.00	0.410	97.94
		0.000259	0.00657	7.25	0.366	98.31
		0.000217	0.00552	7.50	0.325	98.63
		0.000183	0.00465	7.75	0.286	98.92
		0.000154	0.00391	8.00	0.250	99.17
Clay		0.000129	0.00328	8.25	0.214	99.38
		0.000109	0.00276	8.50	0.181	99.56
		0.000091	0.00232	8.75	0.150	99.71
		0.000077	0.00195	9.00	0.124	99.84
		0.000065	0.00164	9.25	0.102	99.94
		0.000054	0.00138	9.50	0.061	100.00
		0.000046	0.00116	9.75	0.000	100.00
		0.000038	0.00098	10.00	0.000	100.00
		0.000032	0.00082	10.25	0.000	100.00
		0.000027	0.00069	10.50	0.000	100.00
		0.000023	0.00058	10.75	0.000	100.00
		0.000019	0.00049	11.00	0.000	100.00
		0.000016	0.00041	11.25	0.000	100.00
		0.000015	0.00038	11.50	0.000	100.00
		0.000003	0.00009	13.50	0.000	100.00

Sorting Statistics (Folk)			
Parameter	Trask	Inman	Folk
Median	Medium sand sized		
(in)	0.0109	0.0109	0.0109
(mm)	0.2776	0.2776	0.2776
Mean	Medium sand sized		
(in)	0.0137	0.0098	0.0102
(mm)	0.3490	0.2487	0.2579
Sorting	Poor		
	2.132	1.635	1.728
Skewness	Finely skewed		
	0.967	0.496	0.183
Kurtosis	Lepokurtic		
	0.240	0.838	1.127

Component Percentages				
Gravel	Sand	Silt	Clay	Silt + Clay
0.00	87.18	11.99	0.83	12.82

Percentile [Weight, %]	Particle Diameter [in.]	[mm]	[phi]
5	0.0500	1.2704	-0.3453
10	0.0384	0.9743	0.0376
16	0.0304	0.7723	0.3728
25	0.0225	0.5721	0.8055
40	0.0145	0.3677	1.4436
50	0.0109	0.2776	1.8491
70	0.0060	0.1513	2.7243
75	0.0050	0.1258	2.9905
84	0.0032	0.0801	3.6426
90	0.0018	0.0459	4.4441
95	0.0008	0.0197	5.6646

**All Grain Sizes Classed Using Wentworth Scale

F

ADVANCED TECHNOLOGY LABORATORIES

SUBCONTRACT ORDER

Work Order: 2200381

SENDING LABORATORY:

Advanced Technology Laboratories
3275 Walnut Avenue
Signal Hill, CA 90755
Phone: 562.989.4045
Fax: 562.989.6348
Project Manager: Jerald Ancheta
(Jerald.Ancheta@atlglobal.com)
Sampler: _Client Sampler

RECEIVING LABORATORY:

Core Laboratories LP
3437 Landco Dr.
Bakersfield, CA 93308
Phone :(661) 325-5657
Fax:
PO#: SC16086

IMPORTANT : Please 'J-Flag' results to MDL. Please include Work Order # and PO # in your invoice.

QC Requirements:
- [x] Routine
- [ ] MS/MSD
- [ ] Caltrans
- [ ] Level IV*
- [ ] DUP
- [ ] Other: _____

TAT Requirements:
- [x] Standard
- [ ] Rush _____ Days
- [ ] Fastest Possible

EDD Requirements:
- [ ] Standard Excel
- [ ] Geotracker EDF
- [ ] EQuis
- [ ] Other: _____

* All Level IV sample containers (including empty ones) must be returned to ATL 30 days after receipt.

Analysis	Expires	Sampled	Comments
ATL Lab#: 2200381-06 / Sample 28 Particle_Size_SUB [Particle Size by Sieve & Laser Methods]	**Soil** 03/29/22 10:15	**03/15/22 10:15** Glass Jar - 8 oz	

Prepared by: [signature] 3/16/22
Sample Control Technician — Date

Inspected by: [signature] 3/16/22
PM Lead / SC Lead — Date

Approved by: Victoria Wichup 3/16/22
Dedicated ATL Project Manager — Date

[signature] 3/16/22 16:00
Released By ATL Sample Control — Date — Time

GLS 3/16/22 16:00
Received By Courier — Date — Time

GLS
Released By Courier — Date — Time

[signature] 3-22-22
Received By Subcontract Laboratory — Date — Time

Released By — Date — Time

Received By — Date — Time

C:\PROGRAM FILES (X86)\PROMIUM\ELEMENT\PRINT\SCO_ATL(A.10).NEW.RPT

CERES Analytical Laboratory, Inc.
4919 Windplay Dr. Suite 1, El Dorado Hills, CA 95762

March 31, 2022 Ceres ID: 15107

Advanced Technology Laboratories
3275 Walnut Avenue
Signal Hill, CA 90755

The following report contains the results for the one soil sample received on March 17, 2022. This sample was analyzed for tetra through octa chlorinated dioxins and dibenzofurans by EPA method 8290. Routine turn-around time was provided for this work.

Sample results are reported on a dry weight basis.

This work was authorized under Advanced Technology Laboratories' Work Order # 2200381 and P.O. # SC16086.

Continuing Calibration Verification (CCV) Requirements
All associated calibration verification standard(s) (CCV) met the acceptance criteria.

The report consists of a Cover Letter, Sample Inventory (Section I), Data Summary (Section II), Sample Tracking (Section VI), and Qualifiers/Abbreviations (Section VII). Raw Data (Section III), Continuing Calibration (Section IV), and Initial Calibration (Section V) are available in a full report (.pdf format) upon request.

If you have any questions regarding this report, please feel free to contact me at (916)932-5011.

Sincerely,

James M. Hedin
Director of Operations/CEO
jhedin@ceres-lab.com

Section I: Sample Inventory

Ceres Sample ID:	Sample ID	Date Received	Collection Date	&Time
15107-001	Sample 28 / 2200381-06	3/17/2022	3/15/2022	10:15

Section II: Data Summary

CERES Analytical Laboratory, Inc.
4919 Windplay Dr.Suite 1, El Dorado Hills, CA 95762

EPA Method 8290A

Quality Assurance Sample Method Blank		
Project ID: 2200381	QC Batch #: 2601 Matrix: Soil Sample Size: 10.00 g	Date Received: NA Date Extracted: 3/28/2022 Date Analyzed: 3/29/2022

Analyte	Conc. (pg/g)	MDL	RL	Qual.	Labeled Standards	% R	LCL-UCL (a)	Qualifiers
2,3,7,8-TCDD	DL= 0.137	0.172	0.500		13C-2378-TCDD	82.8	40-135	
12378-PeCDD	DL= 0.584	0.327	2.50		13C-12378-PeCDD	106	40-135	
123478-HxCDD	DL= 0.822	0.327	2.50		13C-123478-HxCDD	78.8	40-135	
123678-HxCDD	DL= 0.638	0.655	2.50		13C-123678-HxCDD	102	40-135	
123789-HxCDD	DL= 0.703	0.315	2.50		13C-1234678-HpCDD	83.5	40-135	
1234678-HpCDD	DL= 0.442	0.409	2.50		13C-OCDD	78.3	40-135	
OCDD	DL= 0.841	1.01	5.00		13C-2378-TCDF	86.7	40-135	
2,3,7,8-TCDF	DL= 0.209	0.0886	0.500		13C-12378-PeCDF	102	40-135	
12378-PeCDF	DL= 0.343	0.412	2.50		13C-23478-PeCDF	102	40-135	
23478-PeCDF	DL= 0.335	0.422	2.50		13C-123478-HxCDF	80.4	40-135	
123478-HxCDF	DL= 0.391	0.518	2.50		13C-123678-HxCDF	116	40-135	
123678-HxCDF	DL= 0.304	0.533	2.50		13C-234678-HxCDF	103	40-135	
234678-HxCDF	DL= 0.354	0.319	2.50		13C-123789-HxCDF	95.6	40-135	
123789-HxCDF	DL= 0.394	0.425	2.50		13C-1234678-HpCDF	107	40-135	
1234678-HpCDF	DL= 0.311	0.279	2.50		13C-1234789-HpCDF	88.6	40-135	
1234789-HpCDF	DL= 0.498	0.378	2.50					
OCDF	DL= 0.692	0.461	5.00					

Totals	Conc. (pg/g)	EMPC
Total TCDD	DL= 0.137	
Total PeCDD	DL= 0.584	
Total HxCDD	DL= 0.822	
Total HpCDD	DL= 0.442	
Total TCDF	DL= 0.209	
Total PeCDF	DL= 0.343	
Total HxCDF	DL= 0.394	
Total HpCDF	DL= 0.498	

CRS		
37Cl4-2378-TCDD	121	40-135

DL - Signifies Non-Detect (ND<) sample specific detection limit.
EMPC - Estimated Maximum Possible Concentration due to ion abundance ratio failure.
(a) - Lower control limit - Upper control limit
(b) - TEQ based on (2005) World Health Organization (WHO) Toxic Equivalent Factors.

Total Toxic Equivalency (TEQ min.) (b)**:** 0.0 pg/g

Analyst: JMH **Reviewed by: BS**

CERES Analytical Laboratory, Inc.
4919 Windplay Dr.Suite 1, El Dorado Hills, CA 95762

EPA Method 8290A

Quality Assurance Samples Laboratory Control Samples		Date Received: NA
	QC Batch #: 2601	Date Extracted: 3/28/2022
	Matrix: Soil	Date Analyzed: 3/29/2022
Project ID: 2200381	Sample Size: 10.00 g	

Analyte	LCS1 % Rec.	LCS2 % Rec.	%RSD	Labeled Standards	LCS1 % Rec.	LCS2 % Rec	Limits (a)
2,3,7,8-TCDD	89.3	90.4	0.866	13C-2378-TCDD	85.7	89.1	40-135
12378-PeCDD	90.2	95.6	4.11	13C-12378-PeCDD	106	110	40-135
123478-HxCDD	110	111	0.640	13C-123478-HxCDD	88.6	81.7	40-135
123678-HxCDD	109	110	0.646	13C-123678-HxCDD	108	115	40-135
123789-HxCDD	96.4	93.4	2.24	13C-1234678-HpCDD	92.7	97.9	40-135
1234678-HpCDD	100	98.2	1.28	13C-OCDD	81.4	79.0	40-135
OCDD	95.4	99.5	2.98	13C-2378-TCDF	86.3	90.6	40-135
2,3,7,8-TCDF	92.7	94.5	1.36	13C-12378-PeCDF	107	111	40-135
12378-PeCDF	86.8	87.4	0.487	13C-23478-PeCDF	98.3	104	40-135
23478-PeCDF	102	101	0.697	13C-123478-HxCDF	91.4	95.4	40-135
123478-HxCDF	104	95.4	6.10	13C-123678-HxCDF	120	118	40-135
123678-HxCDF	97.2	103	4.10	13C-234678-HxCDF	104	108	40-135
234678-HxCDF	100	98	1.43	13C-123789-HxCDF	99.6	99.6	40-135
123789-HxCDF	109	105	2.64	13C-1234678-HpCDF	111	108	40-135
1234678-HpCDF	97.6	102	3.12	13C-1234789-HpCDF	94.6	95.0	40-135
1234789-HpCDF	103	101	1.39				
OCDF	101	106	3.42				
				CRS			
				37Cl4-2378-TCDD	123	119	40-135

(a) Limits based on method acceptance criteria.

Analyst: JMH **Reviewed by: BS**

CERES Analytical Laboratory, Inc.
4919 Windplay Dr.Suite 1, El Dorado Hills, CA 95762

EPA Method 8290A

Client Sample ID: Sample 28 / 2200381-06					
Project ID: 2200381	**Ceres Sample ID:** 15107-001			**Date Received:** 3/17/2022	
	QC Batch #: 2601			**Date Extracted:** 3/28/2022	
Date Collected: 3/15/2022	**Matrix:** Soil			**Date Analyzed:** 3/29/2022	
Time Collected: 10:15	**Sample Size:** 13.52 g	**% Solids:** 74.9			

Analyte	Conc. (pg/g)	MDL	RL	Qual.	Labeled Standards	% R	LCL-UCL (a)	Qualifiers
2,3,7,8-TCDD	DL= 0.168	0.172	0.494		13C-2378-TCDD	84.8	40-135	
12378-PeCDD	3.66	0.327	2.47		13C-12378-PeCDD	96.9	40-135	
123478-HxCDD	7.17	0.327	2.47		13C-123478-HxCDD	81.0	40-135	
123678-HxCDD	13.9	0.655	2.47		13C-123678-HxCDD	102	40-135	
123789-HxCDD	9.30	0.315	2.47		13C-1234678-HpCDD	83.3	40-135	
1234678-HpCDD	1,200	0.409	2.47		13C-OCDD	64.8	40-135	
OCDD	10,700	1.01	4.94		13C-2378-TCDF	86.4	40-135	
2,3,7,8-TCDF	0.594	0.0886	0.494		13C-12378-PeCDF	99.0	40-135	
12378-PeCDF	DL= 0.422	0.412	2.47		13C-23478-PeCDF	96.6	40-135	
23478-PeCDF	DL= 0.429	0.422	2.47		13C-123478-HxCDF	84.8	40-135	
123478-HxCDF	3.27	0.518	2.47		13C-123678-HxCDF	109	40-135	
123678-HxCDF	2.34	0.533	2.47	J	13C-234678-HxCDF	97.2	40-135	
234678-HxCDF	DL= 0.441	0.319	2.47		13C-123789-HxCDF	102	40-135	
123789-HxCDF	DL= 0.395	0.425	2.47		13C-1234678-HpCDF	87.9	40-135	
1234678-HpCDF	73.6	0.279	2.47		13C-1234789-HpCDF	95.7	40-135	
1234789-HpCDF	4.73	0.378	2.47					
OCDF	5.92	0.461	4.94					

Totals	Conc. (pg/g)	EMPC
Total TCDD	1.59	
Total PeCDD	31.8	
Total HxCDD	925	
Total HpCDD	8,280	
Total TCDF	4.30	
Total PeCDF	26.7	
Total HxCDF	87.4	
Total HpCDF	290	

CRS			
37Cl4-2378-TCDD	119	40-135	

DL - Signifies Non-Detect (ND<) sample specific detection limit.
EMPC - Estimated Maximum Possible Concentration due to ion abundance ratio failure.
(a) - Lower control limit - Upper control limit
(b) - TEQ based on (2005) World Health Organization (WHO) Toxic Equivalent Factors.

Total Toxic Equivalency (TEQ min.) (b)**:** 23.5 pg/g

Analyst: JMH **Reviewed by: BS**

Section VI: Sample Tracking

ADVANCED TECHNOLOGY LABORATORIES

SUBCONTRACT ORDER

Work Order: 2200381

SENDING LABORATORY:

Advanced Technology Laboratories
3275 Walnut Avenue
Signal Hill, CA 90755
Phone: 562.989.4045
Fax: 562.989.6348
Project Manager: Jerald Ancheta
(Jerald.Ancheta@atlglobal.com)
Sampler: _Client Sampler

RECEIVING LABORATORY:

Ceres Analytical Laboratory, Inc.
4919 Windplay Dr., Suite 1
El Dorado Hills, CA 95762
Phone :(916) 932-5011
Fax: (888) 932-5011
PO#: SC16086

IMPORTANT : Please 'J-Flag' results to MDL. Please include Work Order # and PO # in your invoice.

QC Requirements:
- [x] Routine
- [ ] MS/MSD
- [ ] Caltrans
- [ ] Level IV*
- [ ] DUP
- [ ] Other: _____

TAT Requirements:
- [x] Standard
- [ ] Rush _____ Days
- [ ] Fastest Possible

EDD Requirements:
- [ ] Standard Excel
- [ ] Geotracker EDF
- [ ] EQuis
- [ ] Other: _____

* All Level IV sample containers (including empty ones) must be returned to ATL 30 days after receipt.

Analysis	Expires	Sampled	Comments
ATL Lab#: 2200381-06 / Sample 28	**Soil**	**03/15/22 10:15**	
8290_Dioxins_Dibenzofurans_SUB	04/14/22 10:15	Glass Jar - 8 oz	
[Dioxins and Dibenzofurans]			

Prepared by: Thoai 3/16/22
Sample Control Technician — Date

Inspected by: 3/16/22
PM Lead / SC Lead — Date

Approved by: Victoria Michel 03/16/22
Dedicated ATL Project Manager — Date

	Date	Time		Date	Time
	3/16/22	16:00	GLS	3/16/22	16:00
Released By ATL Sample Control			Received By Courier		
GLS	3/17/22	1350		3/17/22	1300
Released By Courier			Received By Subcontract Laboratory		
Released By			Received By		

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Sample Receipt Check List Logged by: [illegible] (initials)

Ceres ID: 15107	Date/Time: 3/17/22 1350
Client Project ID: 2200381	Received Temp: 3.9 °C Acceptable: Y / N
Chain of Custody Relinquished by signed?	Y / N
Chain of Custody Received by signed?	Y / N
Custody Seals? Present?	Y / N
Intact?	Y / N
NA:	NA
Unlabeled / Illegible Samples	Y / N
Proper Containers:	Y / N
Preservation Acceptable (Chemical or Temperature)?	Y / N
Drinking Water, Sodium Thiosulfate present?	Y / N / NA
Residual Cl?	Y / N / NA
Aqueous sample pH: _____	NA

List COC discrepancies:

[illegible] 3/17/22

List Damaged Samples:

[illegible] 3/17/22

Section VII: Qualifiers/Abbreviations

J	Concentration found below the lower quantitation limit but greater than zero.
B	Analyte present in the associated Method Blank.
E	Concentration found exceeds the Calibration range of the HRGC/HRMS.
D	This analyte concentration was calculated from a dilution.
X	The concentration found is the estimated maximum possible concentration due to chlorinated diphenyl ethers present in the sample.
H	Recovery limits exceeded. See cover letter.
*****	Results taken from dilution.
I	Interference. See cover letter.
Conc.	Concentration Found
DL	Calculated Detection Limit
ND	Non-Detect
% Rec.	Percent Recovery

March 30, 2022

Bianca Mintz
GSI Environmental, Inc.
19200 Von Karman Ave., Suite 800
Irvine, CA 92612
Tel: (949) 679-1070
Fax:

ELAP No.: 1838
CSDLAC No.: 10196
ORELAP No.: CA300003

Re: ATL Work Order Number : 2200395
Client Reference : SATI / 6013

Enclosed are the results for sample(s) received on March 16, 2022 by Advanced Technology Laboratories. The sample(s) are tested for the parameters as indicated on the enclosed chain of custody in accordance with applicable laboratory certifications. The laboratory results contained in this report specifically pertains to the sample(s) submitted.

Thank you for the opportunity to serve the needs of your company. If you have any questions, please feel free to contact me or Project.Management@atlglobal.com.

Sincerely,

Victoria Michel

for

Victoria Michel, Project Assistant
Victoria.Michel@atlglobal.com
Authorized to Release on 03/30/22 17:41 on Behalf of

Amy Leung
Laboratory Director

The test results in this report relate exclusively to the samples as received by the laboratory, and meet the requirements of the methodology under which they were reported; any exceptions are noted within the report and/ or case narrative.

The cover letter/ signature page and the case narrative are integral parts of this analytical report; the absence of any portion of the report renders the report invalid. This report shall not be reproduced except in full, and shall have the express written approval of the laboratory, and the original client firm to do so

.

The electronic signature on this report is signed by an authorized signatory of Advanced Technology Laboratories, and is intended to be legally binding as the equivalent of a handwritten signature.

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Bianca Mintz
Irvine , CA 92612		Reported :	03/30/2022

SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Sample 31	2200395-01	Soil	3/16/22 7:40	3/16/22 18:27
Sample 32	2200395-02	Soil	3/16/22 7:45	3/16/22 18:27
Sample 33	2200395-03	Soil	3/16/22 8:30	3/16/22 18:27
Sample 34	2200395-04	Soil	3/16/22 9:00	3/16/22 18:27
Sample 35	2200395-05	Soil	3/16/22 11:20	3/16/22 18:27
Sample 36	2200395-06	Soil	3/16/22 11:25	3/16/22 18:27

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Bianca Mintz
Irvine , CA 92612		Reported :	03/30/2022

Notes and Definitions

S4	Surrogate was diluted out.
R3	RPD value outside acceptance criteria. Calculation is based on raw values. The analytical batch was validated by the Laboratory Control Sample (LCS).
R	RPD value outside acceptance criteria. Calculation is based on raw values.
M6	Matrix spike analyte was diluted out.
M2	Matrix spike recovery outside of acceptance limit due to possible matrix interference. The analytical batch was validated by the laboratory control sample.
M1	Matrix spike recovery outside of acceptance limit. The analytical batch was validated by the laboratory control sample.
D10	Sample required dilution due to dark sample
ND	Analyte is not detected at or above the Practical Quantitation Limit (PQL). When client requests quantitation against MDL, analyte is not detected at or above the Method Detection Limit (MDL)
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
NR	Not Reported
RPD	Relative Percent Difference
CA2	CA-ELAP (CDPH)
OR1	OR-NELAP (OSPHL)

Notes:
(1) The reported MDL and PQL are based on prep ratio variation and analytical dilution.
(2) The suffix [2C] of specific analytes signifies that the reported result is taken from the instrument's second column.
(3) Results are wet unless otherwise specified.

Percent Moisture

Analyte: Percent Solids

Analyst: LN

Laboratory ID	Client Sample ID	Result	Units	PQL	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
2200395-01	Sample 31	**99**	% by Weight	0.10	1	B2C1293	03/21/2022	03/22/22 12:00	
2200395-02	Sample 32	**98**	% by Weight	0.10	1	B2C1293	03/21/2022	03/22/22 12:00	
2200395-03	Sample 33	**66**	% by Weight	0.10	1	B2C1293	03/21/2022	03/22/22 12:00	
2200395-04	Sample 34	**96**	% by Weight	0.10	1	B2C1293	03/21/2022	03/23/22 14:00	
2200395-05	Sample 35	**94**	% by Weight	0.10	1	B2C1293	03/21/2022	03/22/22 12:00	
2200395-06	Sample 36	**98**	% by Weight	0.10	1	B2C1293	03/21/2022	03/22/22 12:00	

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Bianca Mintz
Irvine , CA 92612		Reported :	03/30/2022

Hexavalent Chromium by EPA 7196A/3060A

Analyte: Hexavalent Chromium **Analyst: VJ**

Laboratory ID	Client Sample ID	Result	Units	PQL	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
2200395-01	Sample 31	**13**	mg/kg dry	1.0	1	B2C1285	03/21/2022	03/21/22 18:02	
2200395-02	Sample 32	**ND**	mg/kg dry	1.0	1	B2C1285	03/21/2022	03/21/22 18:02	
2200395-03	Sample 33	**ND**	mg/kg dry	1.5	1	B2C1285	03/21/2022	03/21/22 18:02	
2200395-04	Sample 34	**ND**	mg/kg dry	1.0	1	B2C1285	03/21/2022	03/21/22 18:02	
2200395-05	Sample 35	**ND**	mg/kg dry	1.1	1	B2C1285	03/21/2022	03/21/22 18:02	
2200395-06	Sample 36	**ND**	mg/kg dry	1.0	1	B2C1285	03/21/2022	03/21/22 18:02	

Mercury by AA (Cold Vapor) EPA 7471A

Analyte: Mercury **Analyst: AEG**

Laboratory ID	Client Sample ID	Result	Units	PQL	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
2200395-01	Sample 31	**ND**	mg/kg dry	0.10	1	B2C1251	03/18/2022	03/18/22 16:33	
2200395-02	Sample 32	**0.22**	mg/kg dry	0.10	1	B2C1251	03/18/2022	03/18/22 16:36	
2200395-03	Sample 33	**ND**	mg/kg dry	0.15	1	B2C1251	03/18/2022	03/18/22 16:45	
2200395-04	Sample 34	**ND**	mg/kg dry	0.10	1	B2C1251	03/18/2022	03/18/22 16:49	
2200395-05	Sample 35	**ND**	mg/kg dry	0.11	1	B2C1251	03/18/2022	03/18/22 16:52	
2200395-06	Sample 36	**ND**	mg/kg dry	0.10	1	B2C1251	03/18/2022	03/18/22 16:56	

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Bianca Mintz
Irvine , CA 92612		Reported :	03/30/2022

Client Sample ID: Sample 31
Lab ID: 2200395-01

Title 22 Metals by ICP-AES EPA 6010B

Analyst: WT

Analyte	Result (mg/kg dry)	PQL (mg/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	**11**	2.0	1	B2C1253	03/18/2022	03/21/22 16:45	
Arsenic	**6.4**	1.0	1	B2C1253	03/18/2022	03/21/22 16:45	
Barium	**310**	1.0	1	B2C1253	03/18/2022	03/21/22 16:45	
Beryllium	ND	1.0	1	B2C1253	03/18/2022	03/21/22 16:45	
Cadmium	**5.5**	1.0	1	B2C1253	03/18/2022	03/21/22 16:45	
Chromium	**130**	1.0	1	B2C1253	03/18/2022	03/21/22 16:45	
Cobalt	**12**	1.0	1	B2C1253	03/18/2022	03/21/22 16:45	
Copper	**220**	2.0	1	B2C1253	03/18/2022	03/21/22 16:45	
Lead	**140**	1.0	1	B2C1253	03/18/2022	03/21/22 16:45	
Molybdenum	**15**	1.0	1	B2C1253	03/18/2022	03/21/22 16:45	
Nickel	**60**	1.0	1	B2C1253	03/18/2022	03/21/22 16:45	
Selenium	**11**	1.0	1	B2C1253	03/18/2022	03/21/22 16:45	
Silver	ND	1.0	1	B2C1253	03/18/2022	03/21/22 16:45	
Thallium	ND	1.0	1	B2C1253	03/18/2022	03/21/22 16:45	
Vanadium	**34**	1.0	1	B2C1253	03/18/2022	03/21/22 16:45	
Zinc	**2500**	10	10	B2C1253	03/18/2022	03/22/22 12:35	

Diesel and Oil Range Organics by EPA 8015B

Analyst: KL

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	**1000**	500	50	B2C1312	03/22/2022	03/23/22 17:34	D10
ORO	**860**	500	50	B2C1312	03/22/2022	03/23/22 17:34	D10
Surrogate: p-Terphenyl	*106 %*	*62 - 141*		B2C1312	03/22/2022	*03/23/22 17:34*	

Polychlorinated Biphenyls by EPA 8082

Analyst: KL

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aroclor 1016	ND	24	1	B2C1291	03/21/2022	03/21/22 19:12	
Aroclor 1221	ND	24	1	B2C1291	03/21/2022	03/21/22 19:12	
Aroclor 1232	ND	24	1	B2C1291	03/21/2022	03/21/22 19:12	
Aroclor 1242	ND	24	1	B2C1291	03/21/2022	03/21/22 19:12	
Aroclor 1248	ND	24	1	B2C1291	03/21/2022	03/21/22 19:12	
Aroclor 1254	ND	24	1	B2C1291	03/21/2022	03/21/22 19:12	
Aroclor 1260	ND	24	1	B2C1291	03/21/2022	03/21/22 19:12	
Surrogate: Decachlorobiphenyl	*19.6 %*	*0 - 87*		B2C1291	03/21/2022	*03/21/22 19:12*	
Surrogate: Tetrachloro-m-xylene	*12.3 %*	*0 - 103*		B2C1291	03/21/2022	*03/21/22 19:12*	

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Bianca Mintz
Irvine , CA 92612		Reported :	03/30/2022

Client Sample ID: Sample 31
Lab ID: 2200395-01

Semivolatile Organic Compounds by EPA 8270C **Analyst: EB**

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,2,4-Trichlorobenzene	ND	33000	100	B2C1292	03/21/2022	03/22/22 01:32	D10
1,2-Dichlorobenzene	ND	33000	100	B2C1292	03/21/2022	03/22/22 01:32	D10
1,3-Dichlorobenzene	ND	33000	100	B2C1292	03/21/2022	03/22/22 01:32	D10
1,4-Dichlorobenzene	ND	33000	100	B2C1292	03/21/2022	03/22/22 01:32	D10
2,4,5-Trichlorophenol	ND	33000	100	B2C1292	03/21/2022	03/22/22 01:32	D10
2,4,6-Trichlorophenol	ND	33000	100	B2C1292	03/21/2022	03/22/22 01:32	D10
2,4-Dichlorophenol	ND	170000	100	B2C1292	03/21/2022	03/22/22 01:32	D10
2,4-Dimethylphenol	ND	33000	100	B2C1292	03/21/2022	03/22/22 01:32	D10
2,4-Dinitrophenol	ND	170000	100	B2C1292	03/21/2022	03/22/22 01:32	D10
2,4-Dinitrotoluene	ND	33000	100	B2C1292	03/21/2022	03/22/22 01:32	D10
2,6-Dinitrotoluene	ND	33000	100	B2C1292	03/21/2022	03/22/22 01:32	D10
2-Chloronaphthalene	ND	33000	100	B2C1292	03/21/2022	03/22/22 01:32	D10
2-Chlorophenol	ND	33000	100	B2C1292	03/21/2022	03/22/22 01:32	D10
2-Methylnaphthalene	ND	33000	100	B2C1292	03/21/2022	03/22/22 01:32	D10
2-Methylphenol	ND	33000	100	B2C1292	03/21/2022	03/22/22 01:32	D10
2-Nitroaniline	ND	170000	100	B2C1292	03/21/2022	03/22/22 01:32	D10
2-Nitrophenol	ND	33000	100	B2C1292	03/21/2022	03/22/22 01:32	D10
3,3´-Dichlorobenzidine	ND	66000	100	B2C1292	03/21/2022	03/22/22 01:32	D10
3-Nitroaniline	ND	170000	100	B2C1292	03/21/2022	03/22/22 01:32	D10
4,6-Dinitro-2-methyphenol	ND	170000	100	B2C1292	03/21/2022	03/22/22 01:32	D10
4-Bromophenyl-phenylether	ND	33000	100	B2C1292	03/21/2022	03/22/22 01:32	D10
4-Chloro-3-methylphenol	ND	66000	100	B2C1292	03/21/2022	03/22/22 01:32	D10
4-Chloroaniline	ND	66000	100	B2C1292	03/21/2022	03/22/22 01:32	D10
4-Chlorophenyl-phenylether	ND	33000	100	B2C1292	03/21/2022	03/22/22 01:32	D10
4-Methylphenol	ND	33000	100	B2C1292	03/21/2022	03/22/22 01:32	D10
4-Nitroaniline	ND	170000	100	B2C1292	03/21/2022	03/22/22 01:32	D10
4-Nitrophenol	ND	33000	100	B2C1292	03/21/2022	03/22/22 01:32	D10
Acenaphthene	ND	33000	100	B2C1292	03/21/2022	03/22/22 01:32	D10
Acenaphthylene	ND	33000	100	B2C1292	03/21/2022	03/22/22 01:32	D10
Anthracene	ND	33000	100	B2C1292	03/21/2022	03/22/22 01:32	D10
Benzidine (M)	ND	170000	100	B2C1292	03/21/2022	03/22/22 01:32	D10
Benzo(a)anthracene	ND	33000	100	B2C1292	03/21/2022	03/22/22 01:32	D10
Benzo(a)pyrene	ND	33000	100	B2C1292	03/21/2022	03/22/22 01:32	D10
Benzo(b)fluoranthene	ND	33000	100	B2C1292	03/21/2022	03/22/22 01:32	D10
Benzo(g,h,i)perylene	ND	33000	100	B2C1292	03/21/2022	03/22/22 01:32	D10
Benzo(k)fluoranthene	ND	33000	100	B2C1292	03/21/2022	03/22/22 01:32	D10
Benzoic acid	ND	170000	100	B2C1292	03/21/2022	03/22/22 01:32	D10
Benzyl alcohol	ND	66000	100	B2C1292	03/21/2022	03/22/22 01:32	D10
bis(2-chloroethoxy)methane	ND	33000	100	B2C1292	03/21/2022	03/22/22 01:32	D10
bis(2-Chloroethyl)ether	ND	33000	100	B2C1292	03/21/2022	03/22/22 01:32	D10
bis(2-chloroisopropyl)ether	ND	33000	100	B2C1292	03/21/2022	03/22/22 01:32	D10

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Bianca Mintz
Irvine , CA 92612		Reported :	03/30/2022

Client Sample ID: Sample 31
Lab ID: 2200395-01

Semivolatile Organic Compounds by EPA 8270C **Analyst: EB**

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
bis(2-ethylhexyl)phthalate	**41000**	33000	100	B2C1292	03/21/2022	03/22/22 01:32	D10
Butylbenzylphthalate	ND	33000	100	B2C1292	03/21/2022	03/22/22 01:32	D10
Chrysene	ND	33000	100	B2C1292	03/21/2022	03/22/22 01:32	D10
Di-n-butylphthalate	ND	33000	100	B2C1292	03/21/2022	03/22/22 01:32	D10
Di-n-octylphthalate	ND	33000	100	B2C1292	03/21/2022	03/22/22 01:32	D10
Dibenz(a,h)anthracene	ND	33000	100	B2C1292	03/21/2022	03/22/22 01:32	D10
Dibenzofuran	ND	33000	100	B2C1292	03/21/2022	03/22/22 01:32	D10
Diethyl phthalate	ND	33000	100	B2C1292	03/21/2022	03/22/22 01:32	D10
Dimethyl phthalate	ND	33000	100	B2C1292	03/21/2022	03/22/22 01:32	D10
Fluoranthene	ND	33000	100	B2C1292	03/21/2022	03/22/22 01:32	D10
Fluorene	ND	33000	100	B2C1292	03/21/2022	03/22/22 01:32	D10
Hexachlorobenzene	ND	33000	100	B2C1292	03/21/2022	03/22/22 01:32	D10
Hexachlorobutadiene	ND	66000	100	B2C1292	03/21/2022	03/22/22 01:32	D10
Hexachlorocyclopentadiene	ND	66000	100	B2C1292	03/21/2022	03/22/22 01:32	D10
Hexachloroethane	ND	33000	100	B2C1292	03/21/2022	03/22/22 01:32	D10
Indeno(1,2,3-cd)pyrene	ND	33000	100	B2C1292	03/21/2022	03/22/22 01:32	D10
Isophorone	ND	33000	100	B2C1292	03/21/2022	03/22/22 01:32	D10
N-Nitroso-di-n propylamine	ND	33000	100	B2C1292	03/21/2022	03/22/22 01:32	D10
N-Nitrosodiphenylamine	ND	33000	100	B2C1292	03/21/2022	03/22/22 01:32	D10
Naphthalene	ND	33000	100	B2C1292	03/21/2022	03/22/22 01:32	D10
Nitrobenzene	ND	33000	100	B2C1292	03/21/2022	03/22/22 01:32	D10
Pentachlorophenol	ND	170000	100	B2C1292	03/21/2022	03/22/22 01:32	D10
Phenanthrene	ND	33000	100	B2C1292	03/21/2022	03/22/22 01:32	D10
Phenol	ND	33000	100	B2C1292	03/21/2022	03/22/22 01:32	D10
Pyrene	ND	33000	100	B2C1292	03/21/2022	03/22/22 01:32	D10
Pyridine	ND	170000	100	B2C1292	03/21/2022	03/22/22 01:32	D10
Surrogate: 1,2-Dichlorobenzene-d4	*0%*	*23 - 102*		B2C1292	03/21/2022	*03/22/22 01:32*	S4
Surrogate: 2,4,6-Tribromophenol	*0%*	*3 - 138*		B2C1292	03/21/2022	*03/22/22 01:32*	S4
Surrogate: 2-Chlorophenol-d4	*10.0 %*	*18 - 105*		B2C1292	03/21/2022	*03/22/22 01:32*	S4
Surrogate: 2-Fluorobiphenyl	*63.0 %*	*34 - 106*		B2C1292	03/21/2022	*03/22/22 01:32*	
Surrogate: 2-Fluorophenol	*0%*	*16 - 94*		B2C1292	03/21/2022	*03/22/22 01:32*	S4
Surrogate: 4-Terphenyl-d14	*70.0 %*	*31 - 130*		B2C1292	03/21/2022	*03/22/22 01:32*	
Surrogate: Nitrobenzene-d5	*16.0 %*	*23 - 102*		B2C1292	03/21/2022	*03/22/22 01:32*	S4
Surrogate: Phenol-d6	*0%*	*14 - 104*		B2C1292	03/21/2022	*03/22/22 01:32*	S4

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Bianca Mintz
Irvine , CA 92612		Reported :	03/30/2022

Client Sample ID: Sample 32
Lab ID: 2200395-02

Title 22 Metals by ICP-AES EPA 6010B

Analyst: WT

Analyte	Result (mg/kg dry)	PQL (mg/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	**10**	2.0	1	B2C1253	03/18/2022	03/21/22 17:05	
Arsenic	**6.8**	1.0	1	B2C1253	03/18/2022	03/21/22 17:05	
Barium	**210**	1.0	1	B2C1253	03/18/2022	03/21/22 17:05	
Beryllium	ND	1.0	1	B2C1253	03/18/2022	03/21/22 17:05	
Cadmium	**4.8**	1.0	1	B2C1253	03/18/2022	03/21/22 17:05	
Chromium	**130**	1.0	1	B2C1253	03/18/2022	03/21/22 17:05	
Cobalt	**11**	1.0	1	B2C1253	03/18/2022	03/21/22 17:05	
Copper	**220**	2.0	1	B2C1253	03/18/2022	03/21/22 17:05	
Lead	**110**	1.0	1	B2C1253	03/18/2022	03/21/22 17:05	
Molybdenum	**16**	1.0	1	B2C1253	03/18/2022	03/21/22 17:05	
Nickel	**64**	1.0	1	B2C1253	03/18/2022	03/21/22 17:05	
Selenium	**8.8**	1.0	1	B2C1253	03/18/2022	03/21/22 17:05	
Silver	ND	1.0	1	B2C1253	03/18/2022	03/21/22 17:05	
Thallium	ND	1.0	1	B2C1253	03/18/2022	03/21/22 17:05	
Vanadium	**32**	1.0	1	B2C1253	03/18/2022	03/21/22 17:05	
Zinc	**2800**	10	10	B2C1253	03/18/2022	03/22/22 12:36	

Diesel and Oil Range Organics by EPA 8015B

Analyst: KL

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	**1400**	500	50	B2C1312	03/22/2022	03/23/22 17:55	D10
ORO	**1600**	500	50	B2C1312	03/22/2022	03/23/22 17:55	D10
Surrogate: p-Terphenyl	*110 %*	*62 - 141*		B2C1312	03/22/2022	*03/23/22 17:55*	

Polychlorinated Biphenyls by EPA 8082

Analyst: KL

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aroclor 1016	ND	25	1	B2C1291	03/21/2022	03/21/22 19:31	
Aroclor 1221	ND	25	1	B2C1291	03/21/2022	03/21/22 19:31	
Aroclor 1232	ND	25	1	B2C1291	03/21/2022	03/21/22 19:31	
Aroclor 1242	ND	25	1	B2C1291	03/21/2022	03/21/22 19:31	
Aroclor 1248	ND	25	1	B2C1291	03/21/2022	03/21/22 19:31	
Aroclor 1254	ND	25	1	B2C1291	03/21/2022	03/21/22 19:31	
Aroclor 1260	ND	25	1	B2C1291	03/21/2022	03/21/22 19:31	
Surrogate: Decachlorobiphenyl	*23.3 %*	*0 - 87*		B2C1291	03/21/2022	*03/21/22 19:31*	
Surrogate: Tetrachloro-m-xylene	*20.8 %*	*0 - 103*		B2C1291	03/21/2022	*03/21/22 19:31*	

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Bianca Mintz
Irvine , CA 92612		Reported :	03/30/2022

Client Sample ID: Sample 32
Lab ID: 2200395-02

Semivolatile Organic Compounds by EPA 8270C **Analyst: EB**

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,2,4-Trichlorobenzene	ND	34000	100	B2C1292	03/21/2022	03/22/22 01:59	D10
1,2-Dichlorobenzene	ND	34000	100	B2C1292	03/21/2022	03/22/22 01:59	D10
1,3-Dichlorobenzene	ND	34000	100	B2C1292	03/21/2022	03/22/22 01:59	D10
1,4-Dichlorobenzene	ND	34000	100	B2C1292	03/21/2022	03/22/22 01:59	D10
2,4,5-Trichlorophenol	ND	34000	100	B2C1292	03/21/2022	03/22/22 01:59	D10
2,4,6-Trichlorophenol	ND	34000	100	B2C1292	03/21/2022	03/22/22 01:59	D10
2,4-Dichlorophenol	ND	170000	100	B2C1292	03/21/2022	03/22/22 01:59	D10
2,4-Dimethylphenol	ND	34000	100	B2C1292	03/21/2022	03/22/22 01:59	D10
2,4-Dinitrophenol	ND	170000	100	B2C1292	03/21/2022	03/22/22 01:59	D10
2,4-Dinitrotoluene	ND	34000	100	B2C1292	03/21/2022	03/22/22 01:59	D10
2,6-Dinitrotoluene	ND	34000	100	B2C1292	03/21/2022	03/22/22 01:59	D10
2-Chloronaphthalene	ND	34000	100	B2C1292	03/21/2022	03/22/22 01:59	D10
2-Chlorophenol	ND	34000	100	B2C1292	03/21/2022	03/22/22 01:59	D10
2-Methylnaphthalene	ND	34000	100	B2C1292	03/21/2022	03/22/22 01:59	D10
2-Methylphenol	ND	34000	100	B2C1292	03/21/2022	03/22/22 01:59	D10
2-Nitroaniline	ND	170000	100	B2C1292	03/21/2022	03/22/22 01:59	D10
2-Nitrophenol	ND	34000	100	B2C1292	03/21/2022	03/22/22 01:59	D10
3,3´-Dichlorobenzidine	ND	68000	100	B2C1292	03/21/2022	03/22/22 01:59	D10
3-Nitroaniline	ND	170000	100	B2C1292	03/21/2022	03/22/22 01:59	D10
4,6-Dinitro-2-methyphenol	ND	170000	100	B2C1292	03/21/2022	03/22/22 01:59	D10
4-Bromophenyl-phenylether	ND	34000	100	B2C1292	03/21/2022	03/22/22 01:59	D10
4-Chloro-3-methylphenol	ND	68000	100	B2C1292	03/21/2022	03/22/22 01:59	D10
4-Chloroaniline	ND	68000	100	B2C1292	03/21/2022	03/22/22 01:59	D10
4-Chlorophenyl-phenylether	ND	34000	100	B2C1292	03/21/2022	03/22/22 01:59	D10
4-Methylphenol	ND	34000	100	B2C1292	03/21/2022	03/22/22 01:59	D10
4-Nitroaniline	ND	170000	100	B2C1292	03/21/2022	03/22/22 01:59	D10
4-Nitrophenol	ND	34000	100	B2C1292	03/21/2022	03/22/22 01:59	D10
Acenaphthene	ND	34000	100	B2C1292	03/21/2022	03/22/22 01:59	D10
Acenaphthylene	ND	34000	100	B2C1292	03/21/2022	03/22/22 01:59	D10
Anthracene	ND	34000	100	B2C1292	03/21/2022	03/22/22 01:59	D10
Benzidine (M)	ND	170000	100	B2C1292	03/21/2022	03/22/22 01:59	D10
Benzo(a)anthracene	ND	34000	100	B2C1292	03/21/2022	03/22/22 01:59	D10
Benzo(a)pyrene	ND	34000	100	B2C1292	03/21/2022	03/22/22 01:59	D10
Benzo(b)fluoranthene	ND	34000	100	B2C1292	03/21/2022	03/22/22 01:59	D10
Benzo(g,h,i)perylene	ND	34000	100	B2C1292	03/21/2022	03/22/22 01:59	D10
Benzo(k)fluoranthene	ND	34000	100	B2C1292	03/21/2022	03/22/22 01:59	D10
Benzoic acid	ND	170000	100	B2C1292	03/21/2022	03/22/22 01:59	D10
Benzyl alcohol	ND	68000	100	B2C1292	03/21/2022	03/22/22 01:59	D10
bis(2-chloroethoxy)methane	ND	34000	100	B2C1292	03/21/2022	03/22/22 01:59	D10
bis(2-Chloroethyl)ether	ND	34000	100	B2C1292	03/21/2022	03/22/22 01:59	D10
bis(2-chloroisopropyl)ether	ND	34000	100	B2C1292	03/21/2022	03/22/22 01:59	D10

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Bianca Mintz
Irvine , CA 92612		Reported :	03/30/2022

Client Sample ID: Sample 32
Lab ID: 2200395-02

Semivolatile Organic Compounds by EPA 8270C **Analyst: EB**

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
bis(2-ethylhexyl)phthalate	ND	34000	100	B2C1292	03/21/2022	03/22/22 01:59	D10
Butylbenzylphthalate	ND	34000	100	B2C1292	03/21/2022	03/22/22 01:59	D10
Chrysene	ND	34000	100	B2C1292	03/21/2022	03/22/22 01:59	D10
Di-n-butylphthalate	ND	34000	100	B2C1292	03/21/2022	03/22/22 01:59	D10
Di-n-octylphthalate	ND	34000	100	B2C1292	03/21/2022	03/22/22 01:59	D10
Dibenz(a,h)anthracene	ND	34000	100	B2C1292	03/21/2022	03/22/22 01:59	D10
Dibenzofuran	ND	34000	100	B2C1292	03/21/2022	03/22/22 01:59	D10
Diethyl phthalate	ND	34000	100	B2C1292	03/21/2022	03/22/22 01:59	D10
Dimethyl phthalate	ND	34000	100	B2C1292	03/21/2022	03/22/22 01:59	D10
Fluoranthene	**35000**	34000	100	B2C1292	03/21/2022	03/22/22 01:59	D10
Fluorene	ND	34000	100	B2C1292	03/21/2022	03/22/22 01:59	D10
Hexachlorobenzene	ND	34000	100	B2C1292	03/21/2022	03/22/22 01:59	D10
Hexachlorobutadiene	ND	68000	100	B2C1292	03/21/2022	03/22/22 01:59	D10
Hexachlorocyclopentadiene	ND	68000	100	B2C1292	03/21/2022	03/22/22 01:59	D10
Hexachloroethane	ND	34000	100	B2C1292	03/21/2022	03/22/22 01:59	D10
Indeno(1,2,3-cd)pyrene	ND	34000	100	B2C1292	03/21/2022	03/22/22 01:59	D10
Isophorone	ND	34000	100	B2C1292	03/21/2022	03/22/22 01:59	D10
N-Nitroso-di-n propylamine	ND	34000	100	B2C1292	03/21/2022	03/22/22 01:59	D10
N-Nitrosodiphenylamine	ND	34000	100	B2C1292	03/21/2022	03/22/22 01:59	D10
Naphthalene	ND	34000	100	B2C1292	03/21/2022	03/22/22 01:59	D10
Nitrobenzene	ND	34000	100	B2C1292	03/21/2022	03/22/22 01:59	D10
Pentachlorophenol	ND	170000	100	B2C1292	03/21/2022	03/22/22 01:59	D10
Phenanthrene	ND	34000	100	B2C1292	03/21/2022	03/22/22 01:59	D10
Phenol	ND	34000	100	B2C1292	03/21/2022	03/22/22 01:59	D10
Pyrene	ND	34000	100	B2C1292	03/21/2022	03/22/22 01:59	D10
Pyridine	ND	170000	100	B2C1292	03/21/2022	03/22/22 01:59	D10
Surrogate: 1,2-Dichlorobenzene-d4	*29.0 %*	*23 - 102*		B2C1292	03/21/2022	*03/22/22 01:59*	
Surrogate: 2,4,6-Tribromophenol	*0%*	*3 - 138*		B2C1292	03/21/2022	*03/22/22 01:59*	S4
Surrogate: 2-Chlorophenol-d4	*16.0 %*	*18 - 105*		B2C1292	03/21/2022	*03/22/22 01:59*	S4
Surrogate: 2-Fluorobiphenyl	*64.0 %*	*34 - 106*		B2C1292	03/21/2022	*03/22/22 01:59*	
Surrogate: 2-Fluorophenol	*0%*	*16 - 94*		B2C1292	03/21/2022	*03/22/22 01:59*	S4
Surrogate: 4-Terphenyl-d14	*73.0 %*	*31 - 130*		B2C1292	03/21/2022	*03/22/22 01:59*	
Surrogate: Nitrobenzene-d5	*0%*	*23 - 102*		B2C1292	03/21/2022	*03/22/22 01:59*	S4
Surrogate: Phenol-d6	*0%*	*14 - 104*		B2C1292	03/21/2022	*03/22/22 01:59*	S4

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Bianca Mintz
Irvine , CA 92612		Reported :	03/30/2022

Client Sample ID: Sample 33
Lab ID: 2200395-03

Title 22 Metals by ICP-AES EPA 6010B

Analyst: WT

Analyte	Result (mg/kg dry)	PQL (mg/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	**12**	3.0	1	B2C1253	03/18/2022	03/21/22 17:07	
Arsenic	**4.9**	1.5	1	B2C1253	03/18/2022	03/21/22 17:07	
Barium	**290**	1.5	1	B2C1253	03/18/2022	03/21/22 17:07	
Beryllium	ND	1.5	1	B2C1253	03/18/2022	03/21/22 17:07	
Cadmium	**5.8**	1.5	1	B2C1253	03/18/2022	03/21/22 17:07	
Chromium	**160**	1.5	1	B2C1253	03/18/2022	03/21/22 17:07	
Cobalt	**12**	1.5	1	B2C1253	03/18/2022	03/21/22 17:07	
Copper	**300**	3.0	1	B2C1253	03/18/2022	03/21/22 17:07	
Lead	**73**	1.5	1	B2C1253	03/18/2022	03/21/22 17:07	
Molybdenum	**20**	1.5	1	B2C1253	03/18/2022	03/21/22 17:07	
Nickel	**80**	1.5	1	B2C1253	03/18/2022	03/21/22 17:07	
Selenium	**9.2**	1.5	1	B2C1253	03/18/2022	03/21/22 17:07	
Silver	ND	1.5	1	B2C1253	03/18/2022	03/21/22 17:07	
Thallium	ND	1.5	1	B2C1253	03/18/2022	03/21/22 17:07	
Vanadium	**36**	1.5	1	B2C1253	03/18/2022	03/21/22 17:07	
Zinc	**2500**	1.5	1	B2C1253	03/18/2022	03/21/22 17:07	

Diesel and Oil Range Organics by EPA 8015B

Analyst: KL

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	**890**	500	50	B2C1312	03/22/2022	03/23/22 18:16	D10
ORO	**790**	500	50	B2C1312	03/22/2022	03/23/22 18:16	D10
Surrogate: p-Terphenyl	*105 %*	*62 - 141*		B2C1312	03/22/2022	*03/23/22 18:16*	

Polychlorinated Biphenyls by EPA 8082

Analyst: KL

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aroclor 1016	ND	36	1	B2C1291	03/21/2022	03/21/22 19:50	
Aroclor 1221	ND	36	1	B2C1291	03/21/2022	03/21/22 19:50	
Aroclor 1232	ND	36	1	B2C1291	03/21/2022	03/21/22 19:50	
Aroclor 1242	ND	36	1	B2C1291	03/21/2022	03/21/22 19:50	
Aroclor 1248	ND	36	1	B2C1291	03/21/2022	03/21/22 19:50	
Aroclor 1254	ND	36	1	B2C1291	03/21/2022	03/21/22 19:50	
Aroclor 1260	ND	36	1	B2C1291	03/21/2022	03/21/22 19:50	
Surrogate: Decachlorobiphenyl	*22.1 %*	*0 - 87*		B2C1291	03/21/2022	*03/21/22 19:50*	
Surrogate: Tetrachloro-m-xylene	*24.8 %*	*0 - 103*		B2C1291	03/21/2022	*03/21/22 19:50*	

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Bianca Mintz
Irvine , CA 92612		Reported :	03/30/2022

Client Sample ID: Sample 33
Lab ID: 2200395-03

Semivolatile Organic Compounds by EPA 8270C **Analyst: EB**

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,2,4-Trichlorobenzene	ND	50000	100	B2C1292	03/21/2022	03/22/22 02:26	D10
1,2-Dichlorobenzene	ND	50000	100	B2C1292	03/21/2022	03/22/22 02:26	D10
1,3-Dichlorobenzene	ND	50000	100	B2C1292	03/21/2022	03/22/22 02:26	D10
1,4-Dichlorobenzene	ND	50000	100	B2C1292	03/21/2022	03/22/22 02:26	D10
2,4,5-Trichlorophenol	ND	50000	100	B2C1292	03/21/2022	03/22/22 02:26	D10
2,4,6-Trichlorophenol	ND	50000	100	B2C1292	03/21/2022	03/22/22 02:26	D10
2,4-Dichlorophenol	ND	250000	100	B2C1292	03/21/2022	03/22/22 02:26	D10
2,4-Dimethylphenol	ND	50000	100	B2C1292	03/21/2022	03/22/22 02:26	D10
2,4-Dinitrophenol	ND	250000	100	B2C1292	03/21/2022	03/22/22 02:26	D10
2,4-Dinitrotoluene	ND	50000	100	B2C1292	03/21/2022	03/22/22 02:26	D10
2,6-Dinitrotoluene	ND	50000	100	B2C1292	03/21/2022	03/22/22 02:26	D10
2-Chloronaphthalene	ND	50000	100	B2C1292	03/21/2022	03/22/22 02:26	D10
2-Chlorophenol	ND	50000	100	B2C1292	03/21/2022	03/22/22 02:26	D10
2-Methylnaphthalene	ND	50000	100	B2C1292	03/21/2022	03/22/22 02:26	D10
2-Methylphenol	ND	50000	100	B2C1292	03/21/2022	03/22/22 02:26	D10
2-Nitroaniline	ND	250000	100	B2C1292	03/21/2022	03/22/22 02:26	D10
2-Nitrophenol	ND	50000	100	B2C1292	03/21/2022	03/22/22 02:26	D10
3,3´-Dichlorobenzidine	ND	99000	100	B2C1292	03/21/2022	03/22/22 02:26	D10
3-Nitroaniline	ND	250000	100	B2C1292	03/21/2022	03/22/22 02:26	D10
4,6-Dinitro-2-methyphenol	ND	250000	100	B2C1292	03/21/2022	03/22/22 02:26	D10
4-Bromophenyl-phenylether	ND	50000	100	B2C1292	03/21/2022	03/22/22 02:26	D10
4-Chloro-3-methylphenol	ND	99000	100	B2C1292	03/21/2022	03/22/22 02:26	D10
4-Chloroaniline	ND	99000	100	B2C1292	03/21/2022	03/22/22 02:26	D10
4-Chlorophenyl-phenylether	ND	50000	100	B2C1292	03/21/2022	03/22/22 02:26	D10
4-Methylphenol	ND	50000	100	B2C1292	03/21/2022	03/22/22 02:26	D10
4-Nitroaniline	ND	250000	100	B2C1292	03/21/2022	03/22/22 02:26	D10
4-Nitrophenol	ND	50000	100	B2C1292	03/21/2022	03/22/22 02:26	D10
Acenaphthene	ND	50000	100	B2C1292	03/21/2022	03/22/22 02:26	D10
Acenaphthylene	ND	50000	100	B2C1292	03/21/2022	03/22/22 02:26	D10
Anthracene	ND	50000	100	B2C1292	03/21/2022	03/22/22 02:26	D10
Benzidine (M)	ND	250000	100	B2C1292	03/21/2022	03/22/22 02:26	D10
Benzo(a)anthracene	ND	50000	100	B2C1292	03/21/2022	03/22/22 02:26	D10
Benzo(a)pyrene	ND	50000	100	B2C1292	03/21/2022	03/22/22 02:26	D10
Benzo(b)fluoranthene	ND	50000	100	B2C1292	03/21/2022	03/22/22 02:26	D10
Benzo(g,h,i)perylene	ND	50000	100	B2C1292	03/21/2022	03/22/22 02:26	D10
Benzo(k)fluoranthene	ND	50000	100	B2C1292	03/21/2022	03/22/22 02:26	D10
Benzoic acid	ND	250000	100	B2C1292	03/21/2022	03/22/22 02:26	D10
Benzyl alcohol	ND	99000	100	B2C1292	03/21/2022	03/22/22 02:26	D10
bis(2-chloroethoxy)methane	ND	50000	100	B2C1292	03/21/2022	03/22/22 02:26	D10
bis(2-Chloroethyl)ether	ND	50000	100	B2C1292	03/21/2022	03/22/22 02:26	D10
bis(2-chloroisopropyl)ether	ND	50000	100	B2C1292	03/21/2022	03/22/22 02:26	D10

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Bianca Mintz
Irvine , CA 92612		Reported :	03/30/2022

Client Sample ID: Sample 33
Lab ID: 2200395-03

Semivolatile Organic Compounds by EPA 8270C **Analyst: EB**

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
bis(2-ethylhexyl)phthalate	ND	50000	100	B2C1292	03/21/2022	03/22/22 02:26	D10
Butylbenzylphthalate	ND	50000	100	B2C1292	03/21/2022	03/22/22 02:26	D10
Chrysene	ND	50000	100	B2C1292	03/21/2022	03/22/22 02:26	D10
Di-n-butylphthalate	ND	50000	100	B2C1292	03/21/2022	03/22/22 02:26	D10
Di-n-octylphthalate	ND	50000	100	B2C1292	03/21/2022	03/22/22 02:26	D10
Dibenz(a,h)anthracene	ND	50000	100	B2C1292	03/21/2022	03/22/22 02:26	D10
Dibenzofuran	ND	50000	100	B2C1292	03/21/2022	03/22/22 02:26	D10
Diethyl phthalate	ND	50000	100	B2C1292	03/21/2022	03/22/22 02:26	D10
Dimethyl phthalate	ND	50000	100	B2C1292	03/21/2022	03/22/22 02:26	D10
Fluoranthene	ND	50000	100	B2C1292	03/21/2022	03/22/22 02:26	D10
Fluorene	ND	50000	100	B2C1292	03/21/2022	03/22/22 02:26	D10
Hexachlorobenzene	ND	50000	100	B2C1292	03/21/2022	03/22/22 02:26	D10
Hexachlorobutadiene	ND	99000	100	B2C1292	03/21/2022	03/22/22 02:26	D10
Hexachlorocyclopentadiene	ND	99000	100	B2C1292	03/21/2022	03/22/22 02:26	D10
Hexachloroethane	ND	50000	100	B2C1292	03/21/2022	03/22/22 02:26	D10
Indeno(1,2,3-cd)pyrene	ND	50000	100	B2C1292	03/21/2022	03/22/22 02:26	D10
Isophorone	ND	50000	100	B2C1292	03/21/2022	03/22/22 02:26	D10
N-Nitroso-di-n propylamine	ND	50000	100	B2C1292	03/21/2022	03/22/22 02:26	D10
N-Nitrosodiphenylamine	ND	50000	100	B2C1292	03/21/2022	03/22/22 02:26	D10
Naphthalene	ND	50000	100	B2C1292	03/21/2022	03/22/22 02:26	D10
Nitrobenzene	ND	50000	100	B2C1292	03/21/2022	03/22/22 02:26	D10
Pentachlorophenol	ND	250000	100	B2C1292	03/21/2022	03/22/22 02:26	D10
Phenanthrene	ND	50000	100	B2C1292	03/21/2022	03/22/22 02:26	D10
Phenol	ND	50000	100	B2C1292	03/21/2022	03/22/22 02:26	D10
Pyrene	ND	50000	100	B2C1292	03/21/2022	03/22/22 02:26	D10
Pyridine	ND	250000	100	B2C1292	03/21/2022	03/22/22 02:26	D10
Surrogate: 1,2-Dichlorobenzene-d4	*50.0 %*	*23 - 102*		B2C1292	03/21/2022	*03/22/22 02:26*	
Surrogate: 2,4,6-Tribromophenol	*0%*	*3 - 138*		B2C1292	03/21/2022	*03/22/22 02:26*	S4
Surrogate: 2-Chlorophenol-d4	*10.7 %*	*18 - 105*		B2C1292	03/21/2022	*03/22/22 02:26*	S4
Surrogate: 2-Fluorobiphenyl	*61.0 %*	*34 - 106*		B2C1292	03/21/2022	*03/22/22 02:26*	
Surrogate: 2-Fluorophenol	*0%*	*16 - 94*		B2C1292	03/21/2022	*03/22/22 02:26*	S4
Surrogate: 4-Terphenyl-d14	*76.0 %*	*31 - 130*		B2C1292	03/21/2022	*03/22/22 02:26*	
Surrogate: Nitrobenzene-d5	*0%*	*23 - 102*		B2C1292	03/21/2022	*03/22/22 02:26*	S4
Surrogate: Phenol-d6	*0%*	*14 - 104*		B2C1292	03/21/2022	*03/22/22 02:26*	S4

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Bianca Mintz
Irvine , CA 92612		Reported :	03/30/2022

Client Sample ID: Sample 34
Lab ID: 2200395-04

Title 22 Metals by ICP-AES EPA 6010B

Analyst: WT

Analyte	Result (mg/kg dry)	PQL (mg/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	**7.4**	2.1	1	B2C1253	03/18/2022	03/21/22 17:08	
Arsenic	**3.5**	1.0	1	B2C1253	03/18/2022	03/21/22 17:08	
Barium	**200**	1.0	1	B2C1253	03/18/2022	03/21/22 17:08	
Beryllium	ND	1.0	1	B2C1253	03/18/2022	03/21/22 17:08	
Cadmium	**3.4**	1.0	1	B2C1253	03/18/2022	03/21/22 17:08	
Chromium	**110**	1.0	1	B2C1253	03/18/2022	03/21/22 17:08	
Cobalt	**7.6**	1.0	1	B2C1253	03/18/2022	03/21/22 17:08	
Copper	**140**	2.1	1	B2C1253	03/18/2022	03/21/22 17:08	
Lead	**140**	1.0	1	B2C1253	03/18/2022	03/21/22 17:08	
Molybdenum	**13**	1.0	1	B2C1253	03/18/2022	03/21/22 17:08	
Nickel	**54**	1.0	1	B2C1253	03/18/2022	03/21/22 17:08	
Selenium	**5.6**	1.0	1	B2C1253	03/18/2022	03/21/22 17:08	
Silver	ND	1.0	1	B2C1253	03/18/2022	03/21/22 17:08	
Thallium	ND	1.0	1	B2C1253	03/18/2022	03/21/22 17:08	
Vanadium	**28**	1.0	1	B2C1253	03/18/2022	03/21/22 17:08	
Zinc	**1900**	1.0	1	B2C1253	03/18/2022	03/21/22 17:08	

Diesel and Oil Range Organics by EPA 8015B

Analyst: KL

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	**2000**	500	50	B2C1312	03/22/2022	03/23/22 18:38	D10
ORO	**3300**	500	50	B2C1312	03/22/2022	03/23/22 18:38	D10
Surrogate: p-Terphenyl	*113 %*	*62 - 141*		B2C1312	03/22/2022	*03/23/22 18:38*	

Polychlorinated Biphenyls by EPA 8082

Analyst: KL

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aroclor 1016	ND	25	1	B2C1291	03/21/2022	03/21/22 20:09	
Aroclor 1221	ND	25	1	B2C1291	03/21/2022	03/21/22 20:09	
Aroclor 1232	ND	25	1	B2C1291	03/21/2022	03/21/22 20:09	
Aroclor 1242	ND	25	1	B2C1291	03/21/2022	03/21/22 20:09	
Aroclor 1248	ND	25	1	B2C1291	03/21/2022	03/21/22 20:09	
Aroclor 1254	ND	25	1	B2C1291	03/21/2022	03/21/22 20:09	
Aroclor 1260	ND	25	1	B2C1291	03/21/2022	03/21/22 20:09	
Surrogate: Decachlorobiphenyl	*19.4 %*	*0 - 87*		B2C1291	03/21/2022	*03/21/22 20:09*	
Surrogate: Tetrachloro-m-xylene	*22.3 %*	*0 - 103*		B2C1291	03/21/2022	*03/21/22 20:09*	

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Bianca Mintz
Irvine , CA 92612		Reported :	03/30/2022

Client Sample ID: Sample 34
Lab ID: 2200395-04

Semivolatile Organic Compounds by EPA 8270C **Analyst: EB**

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,2,4-Trichlorobenzene	ND	34000	100	B2C1292	03/21/2022	03/22/22 02:52	D10
1,2-Dichlorobenzene	ND	34000	100	B2C1292	03/21/2022	03/22/22 02:52	D10
1,3-Dichlorobenzene	ND	34000	100	B2C1292	03/21/2022	03/22/22 02:52	D10
1,4-Dichlorobenzene	ND	34000	100	B2C1292	03/21/2022	03/22/22 02:52	D10
2,4,5-Trichlorophenol	ND	34000	100	B2C1292	03/21/2022	03/22/22 02:52	D10
2,4,6-Trichlorophenol	ND	34000	100	B2C1292	03/21/2022	03/22/22 02:52	D10
2,4-Dichlorophenol	ND	170000	100	B2C1292	03/21/2022	03/22/22 02:52	D10
2,4-Dimethylphenol	ND	34000	100	B2C1292	03/21/2022	03/22/22 02:52	D10
2,4-Dinitrophenol	ND	170000	100	B2C1292	03/21/2022	03/22/22 02:52	D10
2,4-Dinitrotoluene	ND	34000	100	B2C1292	03/21/2022	03/22/22 02:52	D10
2,6-Dinitrotoluene	ND	34000	100	B2C1292	03/21/2022	03/22/22 02:52	D10
2-Chloronaphthalene	ND	34000	100	B2C1292	03/21/2022	03/22/22 02:52	D10
2-Chlorophenol	ND	34000	100	B2C1292	03/21/2022	03/22/22 02:52	D10
2-Methylnaphthalene	ND	34000	100	B2C1292	03/21/2022	03/22/22 02:52	D10
2-Methylphenol	ND	34000	100	B2C1292	03/21/2022	03/22/22 02:52	D10
2-Nitroaniline	ND	170000	100	B2C1292	03/21/2022	03/22/22 02:52	D10
2-Nitrophenol	ND	34000	100	B2C1292	03/21/2022	03/22/22 02:52	D10
3,3´-Dichlorobenzidine	ND	68000	100	B2C1292	03/21/2022	03/22/22 02:52	D10
3-Nitroaniline	ND	170000	100	B2C1292	03/21/2022	03/22/22 02:52	D10
4,6-Dinitro-2-methyphenol	ND	170000	100	B2C1292	03/21/2022	03/22/22 02:52	D10
4-Bromophenyl-phenylether	ND	34000	100	B2C1292	03/21/2022	03/22/22 02:52	D10
4-Chloro-3-methylphenol	ND	68000	100	B2C1292	03/21/2022	03/22/22 02:52	D10
4-Chloroaniline	ND	68000	100	B2C1292	03/21/2022	03/22/22 02:52	D10
4-Chlorophenyl-phenylether	ND	34000	100	B2C1292	03/21/2022	03/22/22 02:52	D10
4-Methylphenol	ND	34000	100	B2C1292	03/21/2022	03/22/22 02:52	D10
4-Nitroaniline	ND	170000	100	B2C1292	03/21/2022	03/22/22 02:52	D10
4-Nitrophenol	ND	34000	100	B2C1292	03/21/2022	03/22/22 02:52	D10
Acenaphthene	ND	34000	100	B2C1292	03/21/2022	03/22/22 02:52	D10
Acenaphthylene	ND	34000	100	B2C1292	03/21/2022	03/22/22 02:52	D10
Anthracene	ND	34000	100	B2C1292	03/21/2022	03/22/22 02:52	D10
Benzidine (M)	ND	170000	100	B2C1292	03/21/2022	03/22/22 02:52	D10
Benzo(a)anthracene	ND	34000	100	B2C1292	03/21/2022	03/22/22 02:52	D10
Benzo(a)pyrene	ND	34000	100	B2C1292	03/21/2022	03/22/22 02:52	D10
Benzo(b)fluoranthene	ND	34000	100	B2C1292	03/21/2022	03/22/22 02:52	D10
Benzo(g,h,i)perylene	ND	34000	100	B2C1292	03/21/2022	03/22/22 02:52	D10
Benzo(k)fluoranthene	ND	34000	100	B2C1292	03/21/2022	03/22/22 02:52	D10
Benzoic acid	ND	170000	100	B2C1292	03/21/2022	03/22/22 02:52	D10
Benzyl alcohol	ND	68000	100	B2C1292	03/21/2022	03/22/22 02:52	D10
bis(2-chloroethoxy)methane	ND	34000	100	B2C1292	03/21/2022	03/22/22 02:52	D10
bis(2-Chloroethyl)ether	ND	34000	100	B2C1292	03/21/2022	03/22/22 02:52	D10
bis(2-chloroisopropyl)ether	ND	34000	100	B2C1292	03/21/2022	03/22/22 02:52	D10

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Bianca Mintz
Irvine , CA 92612		Reported :	03/30/2022

Client Sample ID: Sample 34
Lab ID: 2200395-04

Semivolatile Organic Compounds by EPA 8270C **Analyst: EB**

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
bis(2-ethylhexyl)phthalate	ND	34000	100	B2C1292	03/21/2022	03/22/22 02:52	D10
Butylbenzylphthalate	ND	34000	100	B2C1292	03/21/2022	03/22/22 02:52	D10
Chrysene	ND	34000	100	B2C1292	03/21/2022	03/22/22 02:52	D10
Di-n-butylphthalate	ND	34000	100	B2C1292	03/21/2022	03/22/22 02:52	D10
Di-n-octylphthalate	ND	34000	100	B2C1292	03/21/2022	03/22/22 02:52	D10
Dibenz(a,h)anthracene	ND	34000	100	B2C1292	03/21/2022	03/22/22 02:52	D10
Dibenzofuran	ND	34000	100	B2C1292	03/21/2022	03/22/22 02:52	D10
Diethyl phthalate	ND	34000	100	B2C1292	03/21/2022	03/22/22 02:52	D10
Dimethyl phthalate	ND	34000	100	B2C1292	03/21/2022	03/22/22 02:52	D10
Fluoranthene	ND	34000	100	B2C1292	03/21/2022	03/22/22 02:52	D10
Fluorene	ND	34000	100	B2C1292	03/21/2022	03/22/22 02:52	D10
Hexachlorobenzene	ND	34000	100	B2C1292	03/21/2022	03/22/22 02:52	D10
Hexachlorobutadiene	ND	68000	100	B2C1292	03/21/2022	03/22/22 02:52	D10
Hexachlorocyclopentadiene	ND	68000	100	B2C1292	03/21/2022	03/22/22 02:52	D10
Hexachloroethane	ND	34000	100	B2C1292	03/21/2022	03/22/22 02:52	D10
Indeno(1,2,3-cd)pyrene	ND	34000	100	B2C1292	03/21/2022	03/22/22 02:52	D10
Isophorone	ND	34000	100	B2C1292	03/21/2022	03/22/22 02:52	D10
N-Nitroso-di-n propylamine	ND	34000	100	B2C1292	03/21/2022	03/22/22 02:52	D10
N-Nitrosodiphenylamine	ND	34000	100	B2C1292	03/21/2022	03/22/22 02:52	D10
Naphthalene	ND	34000	100	B2C1292	03/21/2022	03/22/22 02:52	D10
Nitrobenzene	ND	34000	100	B2C1292	03/21/2022	03/22/22 02:52	D10
Pentachlorophenol	ND	170000	100	B2C1292	03/21/2022	03/22/22 02:52	D10
Phenanthrene	ND	34000	100	B2C1292	03/21/2022	03/22/22 02:52	D10
Phenol	ND	34000	100	B2C1292	03/21/2022	03/22/22 02:52	D10
Pyrene	ND	34000	100	B2C1292	03/21/2022	03/22/22 02:52	D10
Pyridine	ND	170000	100	B2C1292	03/21/2022	03/22/22 02:52	D10
Surrogate: 1,2-Dichlorobenzene-d4	*20.0 %*	*23 - 102*		B2C1292	03/21/2022	*03/22/22 02:52*	S4
Surrogate: 2,4,6-Tribromophenol	*0%*	*3 - 138*		B2C1292	03/21/2022	*03/22/22 02:52*	S4
Surrogate: 2-Chlorophenol-d4	*0%*	*18 - 105*		B2C1292	03/21/2022	*03/22/22 02:52*	S4
Surrogate: 2-Fluorobiphenyl	*51.0 %*	*34 - 106*		B2C1292	03/21/2022	*03/22/22 02:52*	
Surrogate: 2-Fluorophenol	*0%*	*16 - 94*		B2C1292	03/21/2022	*03/22/22 02:52*	S4
Surrogate: 4-Terphenyl-d14	*46.0 %*	*31 - 130*		B2C1292	03/21/2022	*03/22/22 02:52*	
Surrogate: Nitrobenzene-d5	*0%*	*23 - 102*		B2C1292	03/21/2022	*03/22/22 02:52*	S4
Surrogate: Phenol-d6	*0%*	*14 - 104*		B2C1292	03/21/2022	*03/22/22 02:52*	S4

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Bianca Mintz
Irvine , CA 92612		Reported :	03/30/2022

Client Sample ID: Sample 35
Lab ID: 2200395-05

Title 22 Metals by ICP-AES EPA 6010B

Analyst: WT

Analyte	Result (mg/kg dry)	PQL (mg/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	**7.2**	2.1	1	B2C1253	03/18/2022	03/21/22 17:10	
Arsenic	**4.1**	1.1	1	B2C1253	03/18/2022	03/21/22 17:10	
Barium	**220**	1.1	1	B2C1253	03/18/2022	03/21/22 17:10	
Beryllium	ND	1.1	1	B2C1253	03/18/2022	03/21/22 17:10	
Cadmium	**3.0**	1.1	1	B2C1253	03/18/2022	03/21/22 17:10	
Chromium	**84**	1.1	1	B2C1253	03/18/2022	03/21/22 17:10	
Cobalt	**6.6**	1.1	1	B2C1253	03/18/2022	03/21/22 17:10	
Copper	**130**	2.1	1	B2C1253	03/18/2022	03/21/22 17:10	
Lead	**140**	1.1	1	B2C1253	03/18/2022	03/21/22 17:10	
Molybdenum	**10**	1.1	1	B2C1253	03/18/2022	03/21/22 17:10	
Nickel	**38**	1.1	1	B2C1253	03/18/2022	03/21/22 17:10	
Selenium	**4.7**	1.1	1	B2C1253	03/18/2022	03/21/22 17:10	
Silver	**1.4**	1.1	1	B2C1253	03/18/2022	03/21/22 17:10	
Thallium	ND	1.1	1	B2C1253	03/18/2022	03/21/22 17:10	
Vanadium	**28**	1.1	1	B2C1253	03/18/2022	03/21/22 17:10	
Zinc	**2700**	11	10	B2C1253	03/18/2022	03/22/22 12:38	

Diesel and Oil Range Organics by EPA 8015B

Analyst: KL

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	**840**	500	50	B2C1312	03/22/2022	03/23/22 18:59	D10
ORO	**820**	500	50	B2C1312	03/22/2022	03/23/22 18:59	D10
Surrogate: p-Terphenyl	*219 %*	*62 - 141*		B2C1312	03/22/2022	*03/23/22 18:59*	S4

Polychlorinated Biphenyls by EPA 8082

Analyst: KL

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aroclor 1016	ND	51	1	B2C1291	03/21/2022	03/21/22 20:28	
Aroclor 1221	ND	51	1	B2C1291	03/21/2022	03/21/22 20:28	
Aroclor 1232	ND	51	1	B2C1291	03/21/2022	03/21/22 20:28	
Aroclor 1242	ND	51	1	B2C1291	03/21/2022	03/21/22 20:28	
Aroclor 1248	ND	51	1	B2C1291	03/21/2022	03/21/22 20:28	
Aroclor 1254	ND	51	1	B2C1291	03/21/2022	03/21/22 20:28	
Aroclor 1260	ND	51	1	B2C1291	03/21/2022	03/21/22 20:28	
Surrogate: Decachlorobiphenyl	*13.9 %*	*0 - 87*		B2C1291	03/21/2022	*03/21/22 20:28*	
Surrogate: Tetrachloro-m-xylene	*16.8 %*	*0 - 103*		B2C1291	03/21/2022	*03/21/22 20:28*	

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Bianca Mintz
Irvine , CA 92612		Reported :	03/30/2022

Client Sample ID: Sample 35
Lab ID: 2200395-05

Semivolatile Organic Compounds by EPA 8270C **Analyst: EB**

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,2,4-Trichlorobenzene	ND	7100	20	B2C1292	03/21/2022	03/22/22 03:19	D10
1,2-Dichlorobenzene	ND	7100	20	B2C1292	03/21/2022	03/22/22 03:19	D10
1,3-Dichlorobenzene	ND	7100	20	B2C1292	03/21/2022	03/22/22 03:19	D10
1,4-Dichlorobenzene	ND	7100	20	B2C1292	03/21/2022	03/22/22 03:19	D10
2,4,5-Trichlorophenol	ND	7100	20	B2C1292	03/21/2022	03/22/22 03:19	D10
2,4,6-Trichlorophenol	ND	7100	20	B2C1292	03/21/2022	03/22/22 03:19	D10
2,4-Dichlorophenol	ND	35000	20	B2C1292	03/21/2022	03/22/22 03:19	D10
2,4-Dimethylphenol	ND	7100	20	B2C1292	03/21/2022	03/22/22 03:19	D10
2,4-Dinitrophenol	ND	35000	20	B2C1292	03/21/2022	03/22/22 03:19	D10
2,4-Dinitrotoluene	ND	7100	20	B2C1292	03/21/2022	03/22/22 03:19	D10
2,6-Dinitrotoluene	ND	7100	20	B2C1292	03/21/2022	03/22/22 03:19	D10
2-Chloronaphthalene	ND	7100	20	B2C1292	03/21/2022	03/22/22 03:19	D10
2-Chlorophenol	ND	7100	20	B2C1292	03/21/2022	03/22/22 03:19	D10
2-Methylnaphthalene	ND	7100	20	B2C1292	03/21/2022	03/22/22 03:19	D10
2-Methylphenol	ND	7100	20	B2C1292	03/21/2022	03/22/22 03:19	D10
2-Nitroaniline	ND	35000	20	B2C1292	03/21/2022	03/22/22 03:19	D10
2-Nitrophenol	ND	7100	20	B2C1292	03/21/2022	03/22/22 03:19	D10
3,3´-Dichlorobenzidine	ND	14000	20	B2C1292	03/21/2022	03/22/22 03:19	D10
3-Nitroaniline	ND	35000	20	B2C1292	03/21/2022	03/22/22 03:19	D10
4,6-Dinitro-2-methyphenol	ND	35000	20	B2C1292	03/21/2022	03/22/22 03:19	D10
4-Bromophenyl-phenylether	ND	7100	20	B2C1292	03/21/2022	03/22/22 03:19	D10
4-Chloro-3-methylphenol	ND	14000	20	B2C1292	03/21/2022	03/22/22 03:19	D10
4-Chloroaniline	ND	14000	20	B2C1292	03/21/2022	03/22/22 03:19	D10
4-Chlorophenyl-phenylether	ND	7100	20	B2C1292	03/21/2022	03/22/22 03:19	D10
4-Methylphenol	ND	7100	20	B2C1292	03/21/2022	03/22/22 03:19	D10
4-Nitroaniline	ND	35000	20	B2C1292	03/21/2022	03/22/22 03:19	D10
4-Nitrophenol	ND	7100	20	B2C1292	03/21/2022	03/22/22 03:19	D10
Acenaphthene	ND	7100	20	B2C1292	03/21/2022	03/22/22 03:19	D10
Acenaphthylene	ND	7100	20	B2C1292	03/21/2022	03/22/22 03:19	D10
Anthracene	ND	7100	20	B2C1292	03/21/2022	03/22/22 03:19	D10
Benzidine (M)	ND	35000	20	B2C1292	03/21/2022	03/22/22 03:19	D10
Benzo(a)anthracene	ND	7100	20	B2C1292	03/21/2022	03/22/22 03:19	D10
Benzo(a)pyrene	ND	7100	20	B2C1292	03/21/2022	03/22/22 03:19	D10
Benzo(b)fluoranthene	ND	7100	20	B2C1292	03/21/2022	03/22/22 03:19	D10
Benzo(g,h,i)perylene	ND	7100	20	B2C1292	03/21/2022	03/22/22 03:19	D10
Benzo(k)fluoranthene	ND	7100	20	B2C1292	03/21/2022	03/22/22 03:19	D10
Benzoic acid	ND	35000	20	B2C1292	03/21/2022	03/22/22 03:19	D10
Benzyl alcohol	ND	14000	20	B2C1292	03/21/2022	03/22/22 03:19	D10
bis(2-chloroethoxy)methane	ND	7100	20	B2C1292	03/21/2022	03/22/22 03:19	D10
bis(2-Chloroethyl)ether	ND	7100	20	B2C1292	03/21/2022	03/22/22 03:19	D10
bis(2-chloroisopropyl)ether	ND	7100	20	B2C1292	03/21/2022	03/22/22 03:19	D10

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Bianca Mintz
Irvine , CA 92612		Reported :	03/30/2022

Client Sample ID: Sample 35
Lab ID: 2200395-05

Semivolatile Organic Compounds by EPA 8270C **Analyst: EB**

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
bis(2-ethylhexyl)phthalate	ND	7100	20	B2C1292	03/21/2022	03/22/22 03:19	D10
Butylbenzylphthalate	ND	7100	20	B2C1292	03/21/2022	03/22/22 03:19	D10
Chrysene	ND	7100	20	B2C1292	03/21/2022	03/22/22 03:19	D10
Di-n-butylphthalate	ND	7100	20	B2C1292	03/21/2022	03/22/22 03:19	D10
Di-n-octylphthalate	ND	7100	20	B2C1292	03/21/2022	03/22/22 03:19	D10
Dibenz(a,h)anthracene	ND	7100	20	B2C1292	03/21/2022	03/22/22 03:19	D10
Dibenzofuran	ND	7100	20	B2C1292	03/21/2022	03/22/22 03:19	D10
Diethyl phthalate	ND	7100	20	B2C1292	03/21/2022	03/22/22 03:19	D10
Dimethyl phthalate	ND	7100	20	B2C1292	03/21/2022	03/22/22 03:19	D10
Fluoranthene	ND	7100	20	B2C1292	03/21/2022	03/22/22 03:19	D10
Fluorene	ND	7100	20	B2C1292	03/21/2022	03/22/22 03:19	D10
Hexachlorobenzene	ND	7100	20	B2C1292	03/21/2022	03/22/22 03:19	D10
Hexachlorobutadiene	ND	14000	20	B2C1292	03/21/2022	03/22/22 03:19	D10
Hexachlorocyclopentadiene	ND	14000	20	B2C1292	03/21/2022	03/22/22 03:19	D10
Hexachloroethane	ND	7100	20	B2C1292	03/21/2022	03/22/22 03:19	D10
Indeno(1,2,3-cd)pyrene	ND	7100	20	B2C1292	03/21/2022	03/22/22 03:19	D10
Isophorone	ND	7100	20	B2C1292	03/21/2022	03/22/22 03:19	D10
N-Nitroso-di-n propylamine	ND	7100	20	B2C1292	03/21/2022	03/22/22 03:19	D10
N-Nitrosodiphenylamine	ND	7100	20	B2C1292	03/21/2022	03/22/22 03:19	D10
Naphthalene	ND	7100	20	B2C1292	03/21/2022	03/22/22 03:19	D10
Nitrobenzene	ND	7100	20	B2C1292	03/21/2022	03/22/22 03:19	D10
Pentachlorophenol	ND	35000	20	B2C1292	03/21/2022	03/22/22 03:19	D10
Phenanthrene	ND	7100	20	B2C1292	03/21/2022	03/22/22 03:19	D10
Phenol	ND	7100	20	B2C1292	03/21/2022	03/22/22 03:19	D10
Pyrene	ND	7100	20	B2C1292	03/21/2022	03/22/22 03:19	D10
Pyridine	ND	35000	20	B2C1292	03/21/2022	03/22/22 03:19	D10
Surrogate: 1,2-Dichlorobenzene-d4	*38.8 %*	*23 - 102*		B2C1292	03/21/2022	*03/22/22 03:19*	
Surrogate: 2,4,6-Tribromophenol	*28.4 %*	*3 - 138*		B2C1292	03/21/2022	*03/22/22 03:19*	
Surrogate: 2-Chlorophenol-d4	*32.1 %*	*18 - 105*		B2C1292	03/21/2022	*03/22/22 03:19*	
Surrogate: 2-Fluorobiphenyl	*51.6 %*	*34 - 106*		B2C1292	03/21/2022	*03/22/22 03:19*	
Surrogate: 2-Fluorophenol	*21.9 %*	*16 - 94*		B2C1292	03/21/2022	*03/22/22 03:19*	
Surrogate: 4-Terphenyl-d14	*53.8 %*	*31 - 130*		B2C1292	03/21/2022	*03/22/22 03:19*	
Surrogate: Nitrobenzene-d5	*27.6 %*	*23 - 102*		B2C1292	03/21/2022	*03/22/22 03:19*	
Surrogate: Phenol-d6	*21.7 %*	*14 - 104*		B2C1292	03/21/2022	*03/22/22 03:19*	

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Bianca Mintz
Irvine , CA 92612		Reported :	03/30/2022

Client Sample ID: Sample 36
Lab ID: 2200395-06

Title 22 Metals by ICP-AES EPA 6010B

Analyst: WT

Analyte	Result (mg/kg dry)	PQL (mg/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	**7.4**	2.0	1	B2C1253	03/18/2022	03/21/22 17:11	
Arsenic	**4.7**	1.0	1	B2C1253	03/18/2022	03/21/22 17:11	
Barium	**250**	1.0	1	B2C1253	03/18/2022	03/21/22 17:11	
Beryllium	ND	1.0	1	B2C1253	03/18/2022	03/21/22 17:11	
Cadmium	**2.5**	1.0	1	B2C1253	03/18/2022	03/21/22 17:11	
Chromium	**95**	1.0	1	B2C1253	03/18/2022	03/21/22 17:11	
Cobalt	**6.6**	1.0	1	B2C1253	03/18/2022	03/21/22 17:11	
Copper	**98**	2.0	1	B2C1253	03/18/2022	03/21/22 17:11	
Lead	**220**	1.0	1	B2C1253	03/18/2022	03/21/22 17:11	
Molybdenum	**10**	1.0	1	B2C1253	03/18/2022	03/21/22 17:11	
Nickel	**31**	1.0	1	B2C1253	03/18/2022	03/21/22 17:11	
Selenium	**3.7**	1.0	1	B2C1253	03/18/2022	03/21/22 17:11	
Silver	**1.2**	1.0	1	B2C1253	03/18/2022	03/21/22 17:11	
Thallium	ND	1.0	1	B2C1253	03/18/2022	03/21/22 17:11	
Vanadium	**21**	1.0	1	B2C1253	03/18/2022	03/21/22 17:11	
Zinc	**2500**	10	10	B2C1253	03/18/2022	03/22/22 12:40	

Diesel and Oil Range Organics by EPA 8015B

Analyst: KL

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	ND	200	20	B2C1312	03/22/2022	03/23/22 19:20	D10
ORO	ND	200	20	B2C1312	03/22/2022	03/23/22 19:20	D10
Surrogate: p-Terphenyl	*40.4 %*	*62 - 141*		B2C1312	03/22/2022	*03/23/22 19:20*	S4

Polychlorinated Biphenyls by EPA 8082

Analyst: KL

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aroclor 1016	ND	25	1	B2C1291	03/21/2022	03/21/22 20:47	
Aroclor 1221	ND	25	1	B2C1291	03/21/2022	03/21/22 20:47	
Aroclor 1232	ND	25	1	B2C1291	03/21/2022	03/21/22 20:47	
Aroclor 1242	ND	25	1	B2C1291	03/21/2022	03/21/22 20:47	
Aroclor 1248	ND	25	1	B2C1291	03/21/2022	03/21/22 20:47	
Aroclor 1254	ND	25	1	B2C1291	03/21/2022	03/21/22 20:47	
Aroclor 1260	ND	25	1	B2C1291	03/21/2022	03/21/22 20:47	
Surrogate: Decachlorobiphenyl	*19.9 %*	*0 - 87*		B2C1291	03/21/2022	*03/21/22 20:47*	
Surrogate: Tetrachloro-m-xylene	*21.0 %*	*0 - 103*		B2C1291	03/21/2022	*03/21/22 20:47*	

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Bianca Mintz
Irvine , CA 92612		Reported :	03/30/2022

Client Sample ID: Sample 36
Lab ID: 2200395-06

Semivolatile Organic Compounds by EPA 8270C **Analyst: EB**

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,2,4-Trichlorobenzene	ND	34000	100	B2C1292	03/21/2022	03/22/22 03:46	D10
1,2-Dichlorobenzene	ND	34000	100	B2C1292	03/21/2022	03/22/22 03:46	D10
1,3-Dichlorobenzene	ND	34000	100	B2C1292	03/21/2022	03/22/22 03:46	D10
1,4-Dichlorobenzene	ND	34000	100	B2C1292	03/21/2022	03/22/22 03:46	D10
2,4,5-Trichlorophenol	ND	34000	100	B2C1292	03/21/2022	03/22/22 03:46	D10
2,4,6-Trichlorophenol	ND	34000	100	B2C1292	03/21/2022	03/22/22 03:46	D10
2,4-Dichlorophenol	ND	170000	100	B2C1292	03/21/2022	03/22/22 03:46	D10
2,4-Dimethylphenol	ND	34000	100	B2C1292	03/21/2022	03/22/22 03:46	D10
2,4-Dinitrophenol	ND	170000	100	B2C1292	03/21/2022	03/22/22 03:46	D10
2,4-Dinitrotoluene	ND	34000	100	B2C1292	03/21/2022	03/22/22 03:46	D10
2,6-Dinitrotoluene	ND	34000	100	B2C1292	03/21/2022	03/22/22 03:46	D10
2-Chloronaphthalene	ND	34000	100	B2C1292	03/21/2022	03/22/22 03:46	D10
2-Chlorophenol	ND	34000	100	B2C1292	03/21/2022	03/22/22 03:46	D10
2-Methylnaphthalene	ND	34000	100	B2C1292	03/21/2022	03/22/22 03:46	D10
2-Methylphenol	ND	34000	100	B2C1292	03/21/2022	03/22/22 03:46	D10
2-Nitroaniline	ND	170000	100	B2C1292	03/21/2022	03/22/22 03:46	D10
2-Nitrophenol	ND	34000	100	B2C1292	03/21/2022	03/22/22 03:46	D10
3,3´-Dichlorobenzidine	ND	67000	100	B2C1292	03/21/2022	03/22/22 03:46	D10
3-Nitroaniline	ND	170000	100	B2C1292	03/21/2022	03/22/22 03:46	D10
4,6-Dinitro-2-methyphenol	ND	170000	100	B2C1292	03/21/2022	03/22/22 03:46	D10
4-Bromophenyl-phenylether	ND	34000	100	B2C1292	03/21/2022	03/22/22 03:46	D10
4-Chloro-3-methylphenol	ND	67000	100	B2C1292	03/21/2022	03/22/22 03:46	D10
4-Chloroaniline	ND	67000	100	B2C1292	03/21/2022	03/22/22 03:46	D10
4-Chlorophenyl-phenylether	ND	34000	100	B2C1292	03/21/2022	03/22/22 03:46	D10
4-Methylphenol	ND	34000	100	B2C1292	03/21/2022	03/22/22 03:46	D10
4-Nitroaniline	ND	170000	100	B2C1292	03/21/2022	03/22/22 03:46	D10
4-Nitrophenol	ND	34000	100	B2C1292	03/21/2022	03/22/22 03:46	D10
Acenaphthene	ND	34000	100	B2C1292	03/21/2022	03/22/22 03:46	D10
Acenaphthylene	ND	34000	100	B2C1292	03/21/2022	03/22/22 03:46	D10
Anthracene	ND	34000	100	B2C1292	03/21/2022	03/22/22 03:46	D10
Benzidine (M)	ND	170000	100	B2C1292	03/21/2022	03/22/22 03:46	D10
Benzo(a)anthracene	ND	34000	100	B2C1292	03/21/2022	03/22/22 03:46	D10
Benzo(a)pyrene	ND	34000	100	B2C1292	03/21/2022	03/22/22 03:46	D10
Benzo(b)fluoranthene	ND	34000	100	B2C1292	03/21/2022	03/22/22 03:46	D10
Benzo(g,h,i)perylene	ND	34000	100	B2C1292	03/21/2022	03/22/22 03:46	D10
Benzo(k)fluoranthene	ND	34000	100	B2C1292	03/21/2022	03/22/22 03:46	D10
Benzoic acid	ND	170000	100	B2C1292	03/21/2022	03/22/22 03:46	D10
Benzyl alcohol	ND	67000	100	B2C1292	03/21/2022	03/22/22 03:46	D10
bis(2-chloroethoxy)methane	ND	34000	100	B2C1292	03/21/2022	03/22/22 03:46	D10
bis(2-Chloroethyl)ether	ND	34000	100	B2C1292	03/21/2022	03/22/22 03:46	D10
bis(2-chloroisopropyl)ether	ND	34000	100	B2C1292	03/21/2022	03/22/22 03:46	D10

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Bianca Mintz
Irvine , CA 92612		Reported :	03/30/2022

Client Sample ID: Sample 36
Lab ID: 2200395-06

Semivolatile Organic Compounds by EPA 8270C **Analyst: EB**

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
bis(2-ethylhexyl)phthalate	ND	34000	100	B2C1292	03/21/2022	03/22/22 03:46	D10
Butylbenzylphthalate	ND	34000	100	B2C1292	03/21/2022	03/22/22 03:46	D10
Chrysene	ND	34000	100	B2C1292	03/21/2022	03/22/22 03:46	D10
Di-n-butylphthalate	ND	34000	100	B2C1292	03/21/2022	03/22/22 03:46	D10
Di-n-octylphthalate	ND	34000	100	B2C1292	03/21/2022	03/22/22 03:46	D10
Dibenz(a,h)anthracene	ND	34000	100	B2C1292	03/21/2022	03/22/22 03:46	D10
Dibenzofuran	ND	34000	100	B2C1292	03/21/2022	03/22/22 03:46	D10
Diethyl phthalate	ND	34000	100	B2C1292	03/21/2022	03/22/22 03:46	D10
Dimethyl phthalate	ND	34000	100	B2C1292	03/21/2022	03/22/22 03:46	D10
Fluoranthene	ND	34000	100	B2C1292	03/21/2022	03/22/22 03:46	D10
Fluorene	ND	34000	100	B2C1292	03/21/2022	03/22/22 03:46	D10
Hexachlorobenzene	ND	34000	100	B2C1292	03/21/2022	03/22/22 03:46	D10
Hexachlorobutadiene	ND	67000	100	B2C1292	03/21/2022	03/22/22 03:46	D10
Hexachlorocyclopentadiene	ND	67000	100	B2C1292	03/21/2022	03/22/22 03:46	D10
Hexachloroethane	ND	34000	100	B2C1292	03/21/2022	03/22/22 03:46	D10
Indeno(1,2,3-cd)pyrene	ND	34000	100	B2C1292	03/21/2022	03/22/22 03:46	D10
Isophorone	ND	34000	100	B2C1292	03/21/2022	03/22/22 03:46	D10
N-Nitroso-di-n propylamine	ND	34000	100	B2C1292	03/21/2022	03/22/22 03:46	D10
N-Nitrosodiphenylamine	ND	34000	100	B2C1292	03/21/2022	03/22/22 03:46	D10
Naphthalene	ND	34000	100	B2C1292	03/21/2022	03/22/22 03:46	D10
Nitrobenzene	ND	34000	100	B2C1292	03/21/2022	03/22/22 03:46	D10
Pentachlorophenol	ND	170000	100	B2C1292	03/21/2022	03/22/22 03:46	D10
Phenanthrene	ND	34000	100	B2C1292	03/21/2022	03/22/22 03:46	D10
Phenol	ND	34000	100	B2C1292	03/21/2022	03/22/22 03:46	D10
Pyrene	ND	34000	100	B2C1292	03/21/2022	03/22/22 03:46	D10
Pyridine	ND	170000	100	B2C1292	03/21/2022	03/22/22 03:46	D10
Surrogate: 1,2-Dichlorobenzene-d4	*24.0 %*	*23 - 102*		B2C1292	03/21/2022	*03/22/22 03:46*	
Surrogate: 2,4,6-Tribromophenol	*0%*	*3 - 138*		B2C1292	03/21/2022	*03/22/22 03:46*	S4
Surrogate: 2-Chlorophenol-d4	*12.7 %*	*18 - 105*		B2C1292	03/21/2022	*03/22/22 03:46*	S4
Surrogate: 2-Fluorobiphenyl	*47.0 %*	*34 - 106*		B2C1292	03/21/2022	*03/22/22 03:46*	
Surrogate: 2-Fluorophenol	*0%*	*16 - 94*		B2C1292	03/21/2022	*03/22/22 03:46*	S4
Surrogate: 4-Terphenyl-d14	*65.0 %*	*31 - 130*		B2C1292	03/21/2022	*03/22/22 03:46*	
Surrogate: Nitrobenzene-d5	*0%*	*23 - 102*		B2C1292	03/21/2022	*03/22/22 03:46*	S4
Surrogate: Phenol-d6	*0%*	*14 - 104*		B2C1292	03/21/2022	*03/22/22 03:46*	S4

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Bianca Mintz
Irvine , CA 92612		Reported :	03/30/2022

QUALITY CONTROL SECTION

Percent Moisture - Quality Control

Analyte	Result (% by Weight)	PQL (% by Weight)	MDL (% by Weight)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B2C1293 - No_Prep_WC1_S										
Duplicate (B2C1293-DUP1)			**Source: 2200401-01**			Prepared: 3/21/2022 Analyzed: 3/22/2022				
Percent Solids	93.4613	0.10	0.10		92.0116			1.56	30	

Certificate of Analysis

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Irvine , CA 92612		Reported :	03/30/2022

Title 22 Metals by ICP-AES EPA 6010B - Quality Control

Analyte	Result (mg/kg dry)	PQL (mg/kg dry)	MDL (mg/kg dry)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B2C1253 - EPA 3050B_S										
Matrix Spike (B2C1253-MS1)			**Source: 2200381-01**			Prepared: 3/18/2022 Analyzed: 3/22/2022				
Antimony	27.3065	2.1	0.54	26.4880	8.63631	70.5	0 - 102			
Arsenic	26.1524	1.1	0.13	26.4880	4.08590	83.3	55 - 117			
Barium	257.458	1.1	0.12	26.4880	276.587	-72.2	11 - 177			M2
Beryllium	22.6392	1.1	0.03	26.4986	1.03697	81.5	64 - 115			
Cadmium	29.6710	1.1	0.15	26.4880	5.31766	91.9	62 - 116			
Chromium	123.342	1.1	0.27	26.4880	105.302	68.1	42 - 145			
Cobalt	33.1797	1.1	0.07	26.4880	10.6489	85.1	60 - 126			
Copper	173.803	2.1	0.20	26.4880	150.296	88.7	37 - 163			
Lead	140.477	1.1	0.19	26.4880	123.852	62.8	26 - 161			
Molybdenum	30.5176	1.1	0.13	26.4880	12.6145	67.6	31 - 122			
Nickel	62.6026	1.1	0.19	26.4880	41.5641	79.4	52 - 130			
Selenium	31.0743	1.1	0.43	26.4880	7.61114	88.6	25 - 129			
Silver	11.4260	1.1	0.12	13.2440	0.443175	82.9	48 - 133			
Thallium	19.0882	1.1	0.40	26.4880	ND	72.1	25 - 119			
Vanadium	52.1913	1.1	0.06	26.4880	31.2409	79.1	51 - 141			
Zinc	2777.98	11	1.6	26.4880	2807.54	-112	8 - 170			M2
Matrix Spike Dup (B2C1253-MSD1)			**Source: 2200381-01**			Prepared: 3/18/2022 Analyzed: 3/22/2022				
Antimony	27.8726	2.1	0.54	26.4880	8.63631	72.6	0 - 102	2.05	20	
Arsenic	24.8670	1.1	0.13	26.4880	4.08590	78.5	55 - 117	5.04	20	
Barium	259.402	1.1	0.12	26.4880	276.587	-64.9	11 - 177	0.753	20	M2
Beryllium	22.6446	1.1	0.03	26.4986	1.03697	81.5	64 - 115	0.0234	20	
Cadmium	29.3135	1.1	0.15	26.4880	5.31766	90.6	62 - 116	1.21	20	
Chromium	125.517	1.1	0.27	26.4880	105.302	76.3	42 - 145	1.75	20	
Cobalt	32.7328	1.1	0.07	26.4880	10.6489	83.4	60 - 126	1.36	20	
Copper	177.635	2.1	0.20	26.4880	150.296	103	37 - 163	2.18	20	
Lead	140.566	1.1	0.19	26.4880	123.852	63.1	26 - 161	0.0633	20	
Molybdenum	31.5142	1.1	0.13	26.4880	12.6145	71.4	31 - 122	3.21	20	
Nickel	62.1835	1.1	0.19	26.4880	41.5641	77.8	52 - 130	0.672	20	
Selenium	31.1043	1.1	0.43	26.4880	7.61114	88.7	25 - 129	0.0967	20	
Silver	10.7478	1.1	0.12	13.2440	0.443175	77.8	48 - 133	6.12	20	
Thallium	18.5289	1.1	0.40	26.4880	ND	70.0	25 - 119	2.97	20	
Vanadium	52.4740	1.1	0.06	26.4880	31.2409	80.2	51 - 141	0.540	20	
Zinc	2749.82	11	1.6	26.4880	2807.54	-218	8 - 170	1.02	20	M2

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Bianca Mintz
Irvine , CA 92612		Reported :	03/30/2022

Title 22 Metals by ICP-AES EPA 6010B - Quality Control

Analyte	Result (mg/kg wet)	PQL (mg/kg wet)	MDL (mg/kg wet)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B2C1253 - EPA 3050B_S										
Blank (B2C1253-BLK1)						Prepared: 3/18/2022 Analyzed: 3/21/2022				
Antimony	ND	2.0	0.51							
Arsenic	ND	1.0	0.12							
Barium	ND	1.0	0.12							
Beryllium	ND	1.0	0.03							
Cadmium	ND	1.0	0.14							
Chromium	ND	1.0	0.26							
Cobalt	ND	1.0	0.07							
Copper	ND	2.0	0.19							
Lead	ND	1.0	0.18							
Molybdenum	ND	1.0	0.12							
Nickel	ND	1.0	0.18							
Selenium	ND	1.0	0.40							
Silver	ND	1.0	0.12							
Thallium	ND	1.0	0.38							
Vanadium	ND	1.0	0.06							
Zinc	ND	1.0	0.15							
LCS (B2C1253-BS1)						Prepared: 3/18/2022 Analyzed: 3/21/2022				
Antimony	25.8273	2.0	0.51	25.0000		103	80 - 120			
Arsenic	26.0528	1.0	0.12	25.0000		104	80 - 120			
Barium	26.0989	1.0	0.12	25.0000		104	80 - 120			
Beryllium	25.6420	1.0	0.03	25.0100		103	80 - 120			
Cadmium	26.8541	1.0	0.14	25.0000		107	80 - 120			
Chromium	26.2236	1.0	0.26	25.0000		105	80 - 120			
Cobalt	26.1990	1.0	0.07	25.0000		105	80 - 120			
Copper	24.8564	2.0	0.19	25.0000		99.4	80 - 120			
Lead	26.6098	1.0	0.18	25.0000		106	80 - 120			
Molybdenum	27.2114	1.0	0.12	25.0000		109	80 - 120			
Nickel	24.8660	1.0	0.18	25.0000		99.5	80 - 120			
Selenium	26.5858	1.0	0.40	25.0000		106	80 - 120			
Silver	11.5891	1.0	0.12	12.5000		92.7	80 - 120			
Thallium	26.3903	1.0	0.38	25.0000		106	80 - 120			
Vanadium	24.7790	1.0	0.06	25.0000		99.1	80 - 120			
Zinc	26.2680	1.0	0.15	25.0000		105	80 - 120			

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Irvine , CA 92612		Reported :	03/30/2022

Hexavalent Chromium by EPA 7196A/3060A - Quality Control

Analyte	Result (mg/kg dry)	PQL (mg/kg dry)	MDL (mg/kg dry)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B2C1285 - EPA 3060A_S (WC)										
Matrix Spike (B2C1285-MS1)			**Source: 2200401-01**			Prepared: 3/21/2022 Analyzed: 3/21/2022				
Hexavalent Chromium	23.9100	1.1	0.42	54.3410	ND	44.0	75 - 125			M1
Matrix Spike (B2C1285-MS2)			**Source: 2200401-01**			Prepared: 3/21/2022 Analyzed: 3/21/2022				
Hexavalent Chromium	2217.11	54	21	2394.22	ND	92.6	75 - 125			
Matrix Spike Dup (B2C1285-MSD1)			**Source: 2200401-01**			Prepared: 3/21/2022 Analyzed: 3/21/2022				
Hexavalent Chromium	50.8632	1.1	0.42	54.3410	ND	93.6	75 - 125	72.1	20	R3

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Irvine , CA 92612		Reported :	03/30/2022

Hexavalent Chromium by EPA 7196A/3060A - Quality Control

Analyte	Result (mg/kg wet)	PQL (mg/kg wet)	MDL (mg/kg wet)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B2C1285 - EPA 3060A_S (WC)										
Blank (B2C1285-BLK1)						Prepared: 3/21/2022 Analyzed: 3/21/2022				
Hexavalent Chromium	ND	1.0	0.39							
LCS (B2C1285-BS1)						Prepared: 3/21/2022 Analyzed: 3/21/2022				
Hexavalent Chromium	46.0000	1.0	0.39	50.0000		92.0	80 - 120			

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Irvine , CA 92612		Reported :	03/30/2022

Mercury by AA (Cold Vapor) EPA 7471A - Quality Control

Analyte	Result (mg/kg wet)	PQL (mg/kg wet)	MDL (mg/kg wet)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B2C1251 - EPA 7471_S										
Blank (B2C1251-BLK1)						Prepared: 3/18/2022 Analyzed: 3/18/2022				
Mercury	ND	0.10	0.01							
LCS (B2C1251-BS1)						Prepared: 3/18/2022 Analyzed: 3/18/2022				
Mercury	0.441393	0.10	0.01	0.416667		106	80 - 120			
Matrix Spike (B2C1251-MS1)			**Source: 2200236-17**			Prepared: 3/18/2022 Analyzed: 3/18/2022				
Mercury	0.442365	0.10	0.01	0.416667	0.063101	91.0	70 - 130			
Matrix Spike Dup (B2C1251-MSD1)			**Source: 2200236-17**			Prepared: 3/18/2022 Analyzed: 3/18/2022				
Mercury	0.439433	0.10	0.01	0.416667	0.063101	90.3	70 - 130	0.665	20	

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19200 Von Karman Ave., Suite 800		Report To :	Bianca Mintz
Irvine , CA 92612		Reported :	03/30/2022

Mercury by AA (Cold Vapor) EPA 7471A - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B2C1251 - EPA 7471_S									
Post Spike (B2C1251-PS1)			**Source: 2200236-17**		Prepared: 3/18/2022 Analyzed: 3/18/2022				
Mercury	0.005362		5.00000E-3	0.000757	92.1	85 - 115			

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GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Bianca Mintz
Irvine , CA 92612		Reported :	03/30/2022

Diesel and Oil Range Organics by EPA 8015B - Quality Control

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B2C1312 - GCSEMI_DRO_S										
Blank (B2C1312-BLK1)						Prepared: 3/22/2022 Analyzed: 3/23/2022				
DRO	ND	10	3.6							
ORO	ND	10	3.6							
Surrogate: p-Terphenyl	*80.60*			*80.0000*		*101*	*62 - 141*			
LCS (B2C1312-BS1)						Prepared: 3/22/2022 Analyzed: 3/23/2022				
DRO	989.322	10	3.6	1000.00		98.9	56 - 139			
Surrogate: p-Terphenyl	*83.26*			*80.0000*		*104*	*62 - 141*			
Matrix Spike (B2C1312-MS1)			**Source: 2200405-02**			Prepared: 3/22/2022 Analyzed: 3/23/2022				
DRO	971.873	10	3.6	1000.00	10.8310	96.1	38 - 161			
Surrogate: p-Terphenyl	*82.40*			*80.0000*		*103*	*62 - 141*			
Matrix Spike Dup (B2C1312-MSD1)			**Source: 2200405-02**			Prepared: 3/22/2022 Analyzed: 3/23/2022				
DRO	943.757	10	3.6	1000.00	10.8310	93.3	38 - 161	2.94	20	
Surrogate: p-Terphenyl	*82.27*			*80.0000*		*103*	*62 - 141*			

Certificate of Analysis

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19200 Von Karman Ave., Suite 800		Report To :	Bianca Mintz
Irvine , CA 92612		Reported :	03/30/2022

Polychlorinated Biphenyls by EPA 8082 - Quality Control

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	MDL (ug/kg dry)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B2C1291 - GCSEMI_PCB/PEST_S										
Matrix Spike (B2C1291-MS1)			**Source: 2200395-04**			Prepared: 3/21/2022 Analyzed: 3/21/2022				
Aroclor 1016	72.4190	17	2.0	172.734	ND	41.9	0 - 135			
Aroclor 1260	44.8854	17	2.0	172.734	ND	26.0	0 - 127			
Surrogate: Decachlorobiphenyl	*3.169*			*17.2734*		*18.3*	*0 - 87*			
Surrogate: Tetrachloro-m-xylene	*3.631*			*17.2734*		*21.0*	*0 - 103*			
Matrix Spike Dup (B2C1291-MSD1)			**Source: 2200395-04**			Prepared: 3/21/2022 Analyzed: 3/21/2022				
Aroclor 1016	83.0031	17	2.0	172.734	ND	48.1	0 - 135	13.6	20	
Aroclor 1260	65.8437	17	2.0	172.734	ND	38.1	0 - 127	37.9	20	R
Surrogate: Decachlorobiphenyl	*3.242*			*17.2734*		*18.8*	*0 - 87*			
Surrogate: Tetrachloro-m-xylene	*2.775*			*17.2734*		*16.1*	*0 - 103*			

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Bianca Mintz
Irvine , CA 92612		Reported :	03/30/2022

Polychlorinated Biphenyls by EPA 8082 - Quality Control

Analyte	Result (ug/kg wet)	PQL (ug/kg wet)	MDL (ug/kg wet)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B2C1291 - GCSEMI_PCB/PEST_S										
LCS (B2C1291-BS1)						Prepared: 3/21/2022 Analyzed: 3/21/2022				
Aroclor 1016	111.239	16	1.9	166.667		66.7	11 - 108			
Aroclor 1260	115.652	16	1.9	166.667		69.4	19 - 112			
Surrogate: Decachlorobiphenyl	*8.473*			*16.6667*		*50.8*	*0 - 87*			
Surrogate: Tetrachloro-m-xylene	*10.19*			*16.6667*		*61.1*	*0 - 103*			

Certificate of Analysis

GSI Environmental, Inc.	Project Number : SATI / 6013
19200 Von Karman Ave., Suite 800	Report To : Bianca Mintz
Irvine , CA 92612	Reported : 03/30/2022

Semivolatile Organic Compounds by EPA 8270C - Quality Control

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	MDL (ug/kg dry)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B2C1292 - MSSEMI_NAL										
Matrix Spike (B2C1292-MS1)		**Source: 2200395-04**			Prepared: 3/21/2022 Analyzed: 3/21/2022					
1,2,4-Trichlorobenzene	ND	34000	5200	6909.35	ND	NR	35 - 113			M6
1,2-Dichlorobenzene	2971.02	34000	2700	6909.35	ND	43.0	32 - 102			
1,3-Dichlorobenzene	ND	34000	2800	6909.35	ND	NR	32 - 100			M6
1,4-Dichlorobenzene	3040.12	34000	2800	6909.35	ND	44.0	33 - 97			
2,4,5-Trichlorophenol	ND	34000	3100	6909.35	ND	NR	36 - 124			M6
2,4,6-Trichlorophenol	ND	34000	3600	6909.35	ND	NR	37 - 130			M6
2,4-Dichlorophenol	ND	170000	3500	6909.35	ND	NR	32 - 130			M6
2,4-Dimethylphenol	ND	34000	2700	6909.35	ND	NR	30 - 128			M6
2,4-Dinitrophenol	ND	170000	8900	6909.35	ND	NR	0 - 203			
2,4-Dinitrotoluene	ND	34000	3400	6909.35	ND	NR	21 - 168			M6
2,6-Dinitrotoluene	ND	34000	5000	6909.35	ND	NR	31 - 152			M6
2-Chloronaphthalene	5112.92	34000	2900	6909.35	ND	74.0	33 - 130			
2-Chlorophenol	ND	34000	3200	6909.35	ND	NR	32 - 106			M6
2-Methylnaphthalene	4421.99	34000	2800	6909.35	ND	64.0	33 - 125			
2-Methylphenol	ND	34000	3700	6909.35	ND	NR	34 - 96			M6
2-Nitroaniline	ND	170000	4400	6909.35	ND	NR	30 - 146			M6
2-Nitrophenol	ND	34000	4700	6909.35	ND	NR	22 - 125			M6
3,3´-Dichlorobenzidine	ND	68000	29000	6909.35	ND	NR	19 - 144			M6
3-Nitroaniline	ND	170000	5100	6909.35	ND	NR	36 - 133			M6
4,6-Dinitro-2-methyphenol	ND	170000	4300	6909.35	ND	NR	0 - 196			
4-Bromophenyl-phenylether	ND	34000	6600	6909.35	ND	NR	41 - 121			M6
4-Chloro-3-methylphenol	ND	68000	7400	6909.35	ND	NR	39 - 134			M6
4-Chloroaniline	ND	68000	5500	6909.35	ND	NR	37 - 115			M6
4-Chlorophenyl-phenylether	ND	34000	3500	6909.35	ND	NR	34 - 133			M6
4-Methylphenol	ND	34000	5900	3454.68	ND	NR	34 - 121			M6
4-Nitroaniline	ND	170000	3900	6909.35	ND	NR	30 - 138			M6
4-Nitrophenol	ND	34000	6600	6909.35	ND	NR	5 - 154			M6
Acenaphthene	4698.36	34000	4400	6909.35	ND	68.0	33 - 121			
Acenaphthylene	ND	34000	6400	6909.35	ND	NR	35 - 120			M6
Anthracene	ND	34000	5300	6909.35	ND	NR	28 - 133			M6
Benzidine (M)	ND	170000	150000	6909.35	ND	NR	8 - 175			M6
Benzo(a)anthracene	4905.64	34000	4500	6909.35	ND	71.0	32 - 127			
Benzo(a)pyrene	ND	34000	6600	6909.35	ND	NR	35 - 127			M6
Benzo(b)fluoranthene	ND	34000	6700	6909.35	ND	NR	29 - 126			M6
Benzo(g,h,i)perylene	ND	34000	8400	6909.35	ND	NR	26 - 129			M6
Benzo(k)fluoranthene	5458.39	34000	3400	6909.35	ND	79.0	36 - 120			
Benzoic acid	ND	170000	93000	6909.35	ND	NR	0 - 208			
Benzyl alcohol	ND	68000	3300	6909.35	ND	NR	32 - 120			M6
bis(2-chloroethoxy)methane	ND	34000	6600	6909.35	ND	NR	34 - 108			M6
bis(2-Chloroethyl)ether	ND	34000	6900	6909.35	ND	NR	34 - 100			M6
bis(2-chloroisopropyl)ether	ND	34000	7900	6909.35	ND	NR	21 - 111			M6
bis(2-ethylhexyl)phthalate	ND	34000	6500	6909.35	7323.92	-106	39 - 131			M6
Butylbenzylphthalate	ND	34000	4300	6909.35	ND	NR	39 - 129			M6
Chrysene	ND	34000	8700	6909.35	ND	NR	33 - 126			M6
Di-n-butylphthalate	ND	34000	5300	6909.35	ND	NR	42 - 122			M6

Certificate of Analysis

GSI Environmental, Inc.	Project Number : SATI / 6013
19200 Von Karman Ave., Suite 800	Report To : Bianca Mintz
Irvine , CA 92612	Reported : 03/30/2022

Semivolatile Organic Compounds by EPA 8270C - Quality Control (cont'd)

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	MDL (ug/kg dry)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B2C1292 - MSSEMI_NAL (continued)										
Matrix Spike (B2C1292-MS1) - Continued		**Source: 2200395-04**			Prepared: 3/21/2022 Analyzed: 3/21/2022					
Di-n-octylphthalate	ND	34000	6500	6909.35	ND	NR	30 - 147			M6
Dibenz(a,h)anthracene	ND	34000	4700	6909.35	ND	NR	30 - 126			M6
Dibenzofuran	ND	34000	6000	6909.35	ND	NR	36 - 133			M6
Diethyl phthalate	ND	34000	6100	6909.35	ND	NR	28 - 139			M6
Dimethyl phthalate	ND	34000	4200	6909.35	ND	NR	32 - 129			M6
Fluoranthene	ND	34000	6200	6909.35	11884.1	-172	23 - 140			M6
Fluorene	ND	34000	11000	6909.35	ND	NR	32 - 130			M6
Hexachlorobenzene	ND	34000	5700	6909.35	ND	NR	27 - 148			M6
Hexachlorobutadiene	ND	68000	5400	6909.35	ND	NR	29 - 112			M6
Hexachlorocyclopentadiene	ND	68000	7200	6909.35	ND	NR	13 - 147			M6
Hexachloroethane	ND	34000	9700	6909.35	ND	NR	31 - 104			M6
Indeno(1,2,3-cd)pyrene	ND	34000	7800	6909.35	ND	NR	21 - 137			M6
Isophorone	ND	34000	8800	6909.35	ND	NR	34 - 112			M6
N-Nitroso-di-n propylamine	ND	34000	6200	6909.35	ND	NR	36 - 115			M6
N-Nitrosodiphenylamine	4836.55	34000	3300	6909.35	ND	70.0	40 - 120			
Naphthalene	ND	34000	5800	6909.35	ND	NR	33 - 108			M6
Nitrobenzene	ND	34000	5900	6909.35	ND	NR	32 - 122			M6
Pentachlorophenol	ND	170000	5100	6909.35	ND	NR	0 - 151			
Phenanthrene	ND	34000	6900	6909.35	ND	NR	40 - 122			M6
Phenol	ND	34000	3500	6909.35	ND	NR	35 - 112			M6
Pyrene	ND	34000	7500	6909.35	9811.28	-142	28 - 132			M6
Pyridine	ND	170000	28000	6909.35	ND	NR	5 - 107			M6
Surrogate: 1,2-Dichlorobenzene-d4	*1935*			*6909.35*		*28.0*	*23 - 102*			
Surrogate: 2,4,6-Tribromophenol	*0.000*			*10364.0*		*NR*	*3 - 138*			S4
Surrogate: 2-Chlorophenol-d4	*2626*			*10364.0*		*25.3*	*18 - 105*			
Surrogate: 2-Fluorobiphenyl	*4353*			*6909.35*		*63.0*	*34 - 106*			
Surrogate: 2-Fluorophenol	*0.000*			*10364.0*		*NR*	*16 - 94*			S4
Surrogate: 4-Terphenyl-d14	*4906*			*6909.35*		*71.0*	*31 - 130*			
Surrogate: Nitrobenzene-d5	*0.000*			*6909.35*		*NR*	*23 - 102*			S4
Surrogate: Phenol-d6	*0.000*			*10364.0*		*NR*	*14 - 104*			S4
Matrix Spike Dup (B2C1292-MSD1)		**Source: 2200395-04**			Prepared: 3/21/2022 Analyzed: 3/21/2022					
1,2,4-Trichlorobenzene	ND	34000	5200	6909.35	ND	NR	35 - 113	NR	20	M6
1,2-Dichlorobenzene	ND	34000	2700	6909.35	ND	NR	32 - 102	NR	20	M6
1,3-Dichlorobenzene	ND	34000	2800	6909.35	ND	NR	32 - 100	NR	20	M6
1,4-Dichlorobenzene	3109.21	34000	2800	6909.35	ND	45.0	33 - 97	2.25	20	
2,4,5-Trichlorophenol	ND	34000	3100	6909.35	ND	NR	36 - 124	NR	20	M6
2,4,6-Trichlorophenol	ND	34000	3600	6909.35	ND	NR	37 - 130	NR	20	M6
2,4-Dichlorophenol	ND	170000	3500	6909.35	ND	NR	32 - 130	NR	20	M6
2,4-Dimethylphenol	ND	34000	2700	6909.35	ND	NR	30 - 128	NR	20	M6
2,4-Dinitrophenol	ND	170000	8900	6909.35	ND	NR	0 - 203	NR	20	
2,4-Dinitrotoluene	ND	34000	3400	6909.35	ND	NR	21 - 168	NR	20	M6
2,6-Dinitrotoluene	ND	34000	5000	6909.35	ND	NR	31 - 152	NR	20	M6
2-Chloronaphthalene	4283.80	34000	2900	6909.35	ND	62.0	33 - 130	17.6	20	
2-Chlorophenol	ND	34000	3200	6909.35	ND	NR	32 - 106	NR	20	M6

Certificate of Analysis

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19200 Von Karman Ave., Suite 800	Report To : Bianca Mintz
Irvine , CA 92612	Reported : 03/30/2022

Semivolatile Organic Compounds by EPA 8270C - Quality Control (cont'd)

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	MDL (ug/kg dry)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B2C1292 - MSSEMI_NAL (continued)										
Matrix Spike Dup (B2C1292-MSD1) - Continued		**Source: 2200395-04**			Prepared: 3/21/2022 Analyzed: 3/21/2022					
2-Methylnaphthalene	4007.42	34000	2800	6909.35	ND	58.0	33 - 125	9.84	20	
2-Methylphenol	ND	34000	3700	6909.35	ND	NR	34 - 96	NR	20	M6
2-Nitroaniline	ND	170000	4400	6909.35	ND	NR	30 - 146	NR	20	M6
2-Nitrophenol	ND	34000	4700	6909.35	ND	NR	22 - 125	NR	20	M6
3,3´-Dichlorobenzidine	ND	68000	29000	6909.35	ND	NR	19 - 144	NR	20	M6
3-Nitroaniline	ND	170000	5100	6909.35	ND	NR	36 - 133	NR	20	M6
4,6-Dinitro-2-methyphenol	ND	170000	4300	6909.35	ND	NR	0 - 196	NR	20	
4-Bromophenyl-phenylether	ND	34000	6600	6909.35	ND	NR	41 - 121	NR	20	M6
4-Chloro-3-methylphenol	ND	68000	7400	6909.35	ND	NR	39 - 134	NR	20	M6
4-Chloroaniline	ND	68000	5500	6909.35	ND	NR	37 - 115	NR	20	M6
4-Chlorophenyl-phenylether	4145.61	34000	3500	6909.35	ND	60.0	34 - 133	NR	20	
4-Methylphenol	ND	34000	5900	3454.68	ND	NR	34 - 121	NR	20	M6
4-Nitroaniline	ND	170000	3900	6909.35	ND	NR	30 - 138	NR	20	M6
4-Nitrophenol	ND	34000	6600	6909.35	ND	NR	5 - 154	NR	20	M6
Acenaphthene	5043.83	34000	4400	6909.35	ND	73.0	33 - 121	7.09	20	
Acenaphthylene	ND	34000	6400	6909.35	ND	NR	35 - 120	NR	20	M6
Anthracene	ND	34000	5300	6909.35	ND	NR	28 - 133	NR	20	M6
Benzidine (M)	ND	170000	150000	6909.35	ND	NR	8 - 175	NR	20	M6
Benzo(a)anthracene	4974.74	34000	4500	6909.35	ND	72.0	32 - 127	1.40	20	
Benzo(a)pyrene	ND	34000	6600	6909.35	ND	NR	35 - 127	NR	20	M6
Benzo(b)fluoranthene	ND	34000	6700	6909.35	ND	NR	29 - 126	NR	20	M6
Benzo(g,h,i)perylene	ND	34000	8400	6909.35	ND	NR	26 - 129	NR	20	M6
Benzo(k)fluoranthene	4836.55	34000	3400	6909.35	ND	70.0	36 - 120	12.1	20	
Benzoic acid	ND	170000	93000	6909.35	ND	NR	0 - 208	NR	20	
Benzyl alcohol	ND	68000	3300	6909.35	ND	NR	32 - 120	NR	20	M6
bis(2-chloroethoxy)methane	ND	34000	6600	6909.35	ND	NR	34 - 108	NR	20	M6
bis(2-Chloroethyl)ether	ND	34000	6900	6909.35	ND	NR	34 - 100	NR	20	M6
bis(2-chloroisopropyl)ether	ND	34000	7900	6909.35	ND	NR	21 - 111	NR	20	M6
bis(2-ethylhexyl)phthalate	ND	34000	6500	6909.35	7323.92	-106	39 - 131	NR	20	M6
Butylbenzylphthalate	ND	34000	4300	6909.35	ND	NR	39 - 129	NR	20	M6
Chrysene	ND	34000	8700	6909.35	ND	NR	33 - 126	NR	20	M6
Di-n-butylphthalate	ND	34000	5300	6909.35	ND	NR	42 - 122	NR	20	M6
Di-n-octylphthalate	ND	34000	6500	6909.35	ND	NR	30 - 147	NR	20	M6
Dibenz(a,h)anthracene	ND	34000	4700	6909.35	ND	NR	30 - 126	NR	20	M6
Dibenzofuran	ND	34000	6000	6909.35	ND	NR	36 - 133	NR	20	M6
Diethyl phthalate	ND	34000	6100	6909.35	ND	NR	28 - 139	NR	20	M6
Dimethyl phthalate	4283.80	34000	4200	6909.35	ND	62.0	32 - 129	NR	20	
Fluoranthene	ND	34000	6200	6909.35	11884.1	-172	23 - 140	NR	20	M6
Fluorene	ND	34000	11000	6909.35	ND	NR	32 - 130	NR	20	M6
Hexachlorobenzene	ND	34000	5700	6909.35	ND	NR	27 - 148	NR	20	M6
Hexachlorobutadiene	ND	68000	5400	6909.35	ND	NR	29 - 112	NR	20	M6
Hexachlorocyclopentadiene	ND	68000	7200	6909.35	ND	NR	13 - 147	NR	20	M6
Hexachloroethane	ND	34000	9700	6909.35	ND	NR	31 - 104	NR	20	M6
Indeno(1,2,3-cd)pyrene	ND	34000	7800	6909.35	ND	NR	21 - 137	NR	20	M6
Isophorone	ND	34000	8800	6909.35	ND	NR	34 - 112	NR	20	M6

Certificate of Analysis

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19200 Von Karman Ave., Suite 800		Report To :	Bianca Mintz
Irvine , CA 92612		Reported :	03/30/2022

Semivolatile Organic Compounds by EPA 8270C - Quality Control (cont'd)

Analyte	Result (ug/kg dry)	PQL (ug/kg dry)	MDL (ug/kg dry)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B2C1292 - MSSEMI_NAL (continued)										
Matrix Spike Dup (B2C1292-MSD1) - Continued		**Source: 2200395-04**				Prepared: 3/21/2022 Analyzed: 3/21/2022				
N-Nitroso-di-n propylamine	ND	34000	6200	6909.35	ND	NR	36 - 115	NR	20	M6
N-Nitrosodiphenylamine	4076.52	34000	3300	6909.35	ND	59.0	40 - 120	17.1	20	
Naphthalene	ND	34000	5800	6909.35	ND	NR	33 - 108	NR	20	M6
Nitrobenzene	ND	34000	5900	6909.35	ND	NR	32 - 122	NR	20	M6
Pentachlorophenol	ND	170000	5100	6909.35	ND	NR	0 - 151	NR	20	
Phenanthrene	ND	34000	6900	6909.35	ND	NR	40 - 122	NR	20	M6
Phenol	ND	34000	3500	6909.35	ND	NR	35 - 112	NR	20	M6
Pyrene	ND	34000	7500	6909.35	9811.28	-142	28 - 132	NR	20	M6
Pyridine	ND	170000	28000	6909.35	ND	NR	5 - 107	NR	20	M6
Surrogate: 1,2-Dichlorobenzene-d4	*2004*			*6909.35*		*29.0*	*23 - 102*			
Surrogate: 2,4,6-Tribromophenol	*0.000*			*10364.0*		*NR*	*3 - 138*			S4
Surrogate: 2-Chlorophenol-d4	*1451*			*10364.0*		*14.0*	*18 - 105*			S4
Surrogate: 2-Fluorobiphenyl	*4284*			*6909.35*		*62.0*	*34 - 106*			
Surrogate: 2-Fluorophenol	*0.000*			*10364.0*		*NR*	*16 - 94*			S4
Surrogate: 4-Terphenyl-d14	*4560*			*6909.35*		*66.0*	*31 - 130*			
Surrogate: Nitrobenzene-d5	*0.000*			*6909.35*		*NR*	*23 - 102*			S4
Surrogate: Phenol-d6	*0.000*			*10364.0*		*NR*	*14 - 104*			S4

Certificate of Analysis

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Semivolatile Organic Compounds by EPA 8270C - Quality Control

Analyte	Result (ug/kg wet)	PQL (ug/kg wet)	MDL (ug/kg wet)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B2C1292 - MSSEMI_NAL										
Blank (B2C1292-BLK1)							Prepared: 3/21/2022 Analyzed: 3/21/2022			
1,2,4-Trichlorobenzene	ND	330	50							
1,2-Dichlorobenzene	ND	330	26							
1,3-Dichlorobenzene	ND	330	27							
1,4-Dichlorobenzene	ND	330	27							
2,4,5-Trichlorophenol	ND	330	30							
2,4,6-Trichlorophenol	ND	330	35							
2,4-Dichlorophenol	ND	1600	34							
2,4-Dimethylphenol	ND	330	26							
2,4-Dinitrophenol	ND	1600	86							
2,4-Dinitrotoluene	ND	330	33							
2,6-Dinitrotoluene	ND	330	49							
2-Chloronaphthalene	ND	330	28							
2-Chlorophenol	ND	330	31							
2-Methylnaphthalene	ND	330	27							
2-Methylphenol	ND	330	36							
2-Nitroaniline	ND	1600	43							
2-Nitrophenol	ND	330	45							
3,3´-Dichlorobenzidine	ND	660	280							
3-Nitroaniline	ND	1600	49							
4,6-Dinitro-2-methyphenol	ND	1600	41							
4-Bromophenyl-phenylether	ND	330	64							
4-Chloro-3-methylphenol	ND	660	71							
4-Chloroaniline	ND	660	53							
4-Chlorophenyl-phenylether	ND	330	33							
4-Methylphenol	ND	330	57							
4-Nitroaniline	ND	1600	37							
4-Nitrophenol	ND	330	64							
Acenaphthene	ND	330	43							
Acenaphthylene	ND	330	62							
Anthracene	ND	330	51							
Benzidine (M)	ND	1600	1400							
Benzo(a)anthracene	ND	330	44							
Benzo(a)pyrene	ND	330	64							
Benzo(b)fluoranthene	ND	330	65							
Benzo(g,h,i)perylene	ND	330	81							
Benzo(k)fluoranthene	ND	330	33							
Benzoic acid	ND	1600	890							
Benzyl alcohol	ND	660	32							
bis(2-chloroethoxy)methane	ND	330	64							
bis(2-Chloroethyl)ether	ND	330	66							
bis(2-chloroisopropyl)ether	ND	330	76							
bis(2-ethylhexyl)phthalate	ND	330	63							
Butylbenzylphthalate	ND	330	41							
Chrysene	ND	330	84							
Di-n-butylphthalate	ND	330	51							

Certificate of Analysis

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19200 Von Karman Ave., Suite 800		Report To :	Bianca Mintz
Irvine , CA 92612		Reported :	03/30/2022

Semivolatile Organic Compounds by EPA 8270C - Quality Control (cont'd)

Analyte	Result (ug/kg wet)	PQL (ug/kg wet)	MDL (ug/kg wet)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B2C1292 - MSSEMI_NAL (continued)										
Blank (B2C1292-BLK1) - Continued						Prepared: 3/21/2022 Analyzed: 3/21/2022				
Di-n-octylphthalate	ND	330	63							
Dibenz(a,h)anthracene	ND	330	45							
Dibenzofuran	ND	330	58							
Diethyl phthalate	ND	330	58							
Dimethyl phthalate	ND	330	40							
Fluoranthene	ND	330	60							
Fluorene	ND	330	110							
Hexachlorobenzene	ND	330	55							
Hexachlorobutadiene	ND	660	53							
Hexachlorocyclopentadiene	ND	660	70							
Hexachloroethane	ND	330	94							
Indeno(1,2,3-cd)pyrene	ND	330	75							
Isophorone	ND	330	85							
N-Nitroso-di-n propylamine	ND	330	60							
N-Nitrosodiphenylamine	ND	330	32							
Naphthalene	ND	330	56							
Nitrobenzene	ND	330	57							
Pentachlorophenol	ND	1600	50							
Phenanthrene	ND	330	67							
Phenol	ND	330	34							
Pyrene	ND	330	72							
Pyridine	ND	1600	270							
Surrogate: 1,2-Dichlorobenzene-d4	*3337*			*6666.67*		*50.1*	*23 - 102*			
Surrogate: 2,4,6-Tribromophenol	*5843*			*10000.0*		*58.4*	*3 - 138*			
Surrogate: 2-Chlorophenol-d4	*5208*			*10000.0*		*52.1*	*18 - 105*			
Surrogate: 2-Fluorobiphenyl	*3589*			*6666.67*		*53.8*	*34 - 106*			
Surrogate: 2-Fluorophenol	*4995*			*10000.0*		*50.0*	*16 - 94*			
Surrogate: 4-Terphenyl-d14	*4397*			*6666.67*		*66.0*	*31 - 130*			
Surrogate: Nitrobenzene-d5	*3607*			*6666.67*		*54.1*	*23 - 102*			
Surrogate: Phenol-d6	*5163*			*10000.0*		*51.6*	*14 - 104*			
LCS (B2C1292-BS1)						Prepared: 3/21/2022 Analyzed: 3/21/2022				
1,2,4-Trichlorobenzene	4980.00	330	50	6666.67		74.7	41 - 104			
1,2-Dichlorobenzene	4545.33	330	26	6666.67		68.2	37 - 100			
1,3-Dichlorobenzene	4516.00	330	27	6666.67		67.7	36 - 98			
1,4-Dichlorobenzene	4478.67	330	27	6666.67		67.2	37 - 97			
2,4,5-Trichlorophenol	5900.67	330	30	6666.67		88.5	47 - 115			
2,4,6-Trichlorophenol	5510.67	330	35	6666.67		82.7	48 - 119			
2,4-Dichlorophenol	5386.67	1600	34	6666.67		80.8	46 - 118			
2,4-Dimethylphenol	5511.33	330	26	6666.67		82.7	41 - 114			
2,4-Dinitrophenol	5202.67	1600	86	6666.67		78.0	0 - 180			
2,4-Dinitrotoluene	6325.33	330	33	6666.67		94.9	40 - 138			
2,6-Dinitrotoluene	6138.67	330	49	6666.67		92.1	45 - 131			
2-Chloronaphthalene	5400.00	330	28	6666.67		81.0	46 - 112			
2-Chlorophenol	4710.67	330	31	6666.67		70.7	41 - 99			

Certificate of Analysis

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Semivolatile Organic Compounds by EPA 8270C - Quality Control (cont'd)

Analyte	Result (ug/kg wet)	PQL (ug/kg wet)	MDL (ug/kg wet)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B2C1292 - MSSEMI_NAL (continued)										
LCS (B2C1292-BS1) - Continued						Prepared: 3/21/2022 Analyzed: 3/21/2022				
2-Methylnaphthalene	5284.00	330	27	6666.67		79.3	45 - 111			
2-Methylphenol	4928.00	330	36	6666.67		73.9	40 - 92			
2-Nitroaniline	6104.00	1600	43	6666.67		91.6	44 - 130			
2-Nitrophenol	5060.67	330	45	6666.67		75.9	34 - 114			
3,3´-Dichlorobenzidine	5331.33	660	280	6666.67		80.0	41 - 128			
3-Nitroaniline	6005.33	1600	49	6666.67		90.1	47 - 123			
4,6-Dinitro-2-methyphenol	6117.33	1600	41	6666.67		91.8	2 - 172			
4-Bromophenyl-phenylether	6110.67	330	64	6666.67		91.7	49 - 116			
4-Chloro-3-methylphenol	5816.00	660	71	6666.67		87.2	45 - 127			
4-Chloroaniline	5670.67	660	53	6666.67		85.1	50 - 106			
4-Chlorophenyl-phenylether	5894.67	330	33	6666.67		88.4	49 - 115			
4-Methylphenol	2614.00	330	57	3333.33		78.4	43 - 109			
4-Nitroaniline	5998.67	1600	37	6666.67		90.0	44 - 125			
4-Nitrophenol	6016.00	330	64	6666.67		90.2	30 - 146			
Acenaphthene	5582.00	330	43	6666.67		83.7	44 - 110			
Acenaphthylene	5722.00	330	62	6666.67		85.8	42 - 111			
Anthracene	6147.33	330	51	6666.67		92.2	41 - 117			
Benzidine (M)	4094.00	1600	1400	6666.67		61.4	0 - 189			
Benzo(a)anthracene	6283.33	330	44	6666.67		94.2	45 - 110			
Benzo(a)pyrene	6220.00	330	64	6666.67		93.3	45 - 116			
Benzo(b)fluoranthene	6042.67	330	65	6666.67		90.6	43 - 112			
Benzo(g,h,i)perylene	6216.00	330	81	6666.67		93.2	43 - 113			
Benzo(k)fluoranthene	6114.00	330	33	6666.67		91.7	42 - 114			
Benzoic acid	ND	1600	890	6666.67		NR	0 - 134			
Benzyl alcohol	5012.67	660	32	6666.67		75.2	39 - 117			
bis(2-chloroethoxy)methane	5290.67	330	64	6666.67		79.4	43 - 102			
bis(2-Chloroethyl)ether	4632.67	330	66	6666.67		69.5	38 - 99			
bis(2-chloroisopropyl)ether	4725.33	330	76	6666.67		70.9	30 - 104			
bis(2-ethylhexyl)phthalate	6242.00	330	63	6666.67		93.6	49 - 123			
Butylbenzylphthalate	6312.00	330	41	6666.67		94.7	49 - 122			
Chrysene	6170.00	330	84	6666.67		92.6	46 - 111			
Di-n-butylphthalate	6398.00	330	51	6666.67		96.0	48 - 118			
Di-n-octylphthalate	6382.67	330	63	6666.67		95.7	46 - 131			
Dibenz(a,h)anthracene	6336.67	330	45	6666.67		95.0	43 - 113			
Dibenzofuran	5768.67	330	58	6666.67		86.5	50 - 113			
Diethyl phthalate	6018.00	330	58	6666.67		90.3	50 - 115			
Dimethyl phthalate	5975.33	330	40	6666.67		89.6	48 - 112			
Fluoranthene	6332.00	330	60	6666.67		95.0	40 - 119			
Fluorene	5882.00	330	110	6666.67		88.2	41 - 117			
Hexachlorobenzene	6227.33	330	55	6666.67		93.4	46 - 123			
Hexachlorobutadiene	4930.00	660	53	6666.67		74.0	37 - 104			
Hexachlorocyclopentadiene	5044.00	660	70	6666.67		75.7	30 - 128			
Hexachloroethane	4522.00	330	94	6666.67		67.8	38 - 103			
Indeno(1,2,3-cd)pyrene	6463.33	330	75	6666.67		96.9	43 - 113			
Isophorone	5458.67	330	85	6666.67		81.9	43 - 109			

Certificate of Analysis

GSI Environmental, Inc.		Project Number :	SATI / 6013
19200 Von Karman Ave., Suite 800		Report To :	Bianca Mintz
Irvine , CA 92612		Reported :	03/30/2022

Semivolatile Organic Compounds by EPA 8270C - Quality Control (cont'd)

Analyte	Result (ug/kg wet)	PQL (ug/kg wet)	MDL (ug/kg wet)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B2C1292 - MSSEMI_NAL (continued)										
LCS (B2C1292-BS1) - Continued						Prepared: 3/21/2022 Analyzed: 3/21/2022				
N-Nitroso-di-n propylamine	5163.33	330	60	6666.67		77.4	44 - 111			
N-Nitrosodiphenylamine	5982.67	330	32	6666.67		89.7	48 - 113			
Naphthalene	5044.67	330	56	6666.67		75.7	38 - 103			
Nitrobenzene	4980.67	330	57	6666.67		74.7	40 - 111			
Pentachlorophenol	5526.67	1600	50	6666.67		82.9	33 - 130			
Phenanthrene	6140.00	330	67	6666.67		92.1	42 - 119			
Phenol	4645.33	330	34	6666.67		69.7	43 - 104			
Pyrene	6328.67	330	72	6666.67		94.9	38 - 120			
Pyridine	2327.33	1600	270	6666.67		34.9	0 - 72			
Surrogate: 1,2-Dichlorobenzene-d4	*4635*			*6666.67*		*69.5*	*23 - 102*			
Surrogate: 2,4,6-Tribromophenol	*9598*			*10000.0*		*96.0*	*3 - 138*			
Surrogate: 2-Chlorophenol-d4	*7087*			*10000.0*		*70.9*	*18 - 105*			
Surrogate: 2-Fluorobiphenyl	*5376*			*6666.67*		*80.6*	*34 - 106*			
Surrogate: 2-Fluorophenol	*6545*			*10000.0*		*65.5*	*16 - 94*			
Surrogate: 4-Terphenyl-d14	*6237*			*6666.67*		*93.6*	*31 - 130*			
Surrogate: Nitrobenzene-d5	*5005*			*6666.67*		*75.1*	*23 - 102*			
Surrogate: Phenol-d6	*7059*			*10000.0*		*70.6*	*14 - 104*			

GSI ENVIRONMENTAL

CHAIN-OF-CUSTODY RECORD
Date: 3/16/2022
Page 1 of 1

2200395

3.2°C

FROM:
GSI Environmental Inc.
19200 Von Karman Ave, Suite 800
Irvine, CA 92612
(949) 679-1070

TEL: (949) 679-1070
E-MAIL: bgmintz@gsi-net.com; tfwood@gsi-net.com

PROJECT NAME: SATI
PROJECT CONTACT: Bianca Mintz
GLOBAL ID:

PROJECT NO.: 6013
LAB CONTACT: Christine Caballero
SAMPLER(S): (PRINT) CSJ

LABORATORY: Advanced Technology Lab

TURNAROUND TIME:
☐ SAME DAY ☐ 24 HR ☐ 48 HR
☐ 72 HR ☐ 5 DAYS ☒ STANDARD

SPECIAL INSTRUCTIONS: see email for method details

REQUESTED ANALYSES
Please check box or fill in blank as needed.

LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	Unpreserved	Preserved	Field Filtered	Metals	Cr6	PCBs	PAHs	TPH	Dioxines	phthalate	polybrominated diphenyl	particle size
1	Sample 31	3-16-22	0740	Soil	3	X			X	X	X	X	X				
2	Sample 32	↓	0745	↓	↓	↓			↓	↓	↓	↓	↓				
3	Sample 33		0830														
4	Sample 34		0900														
5	Sample 35		1120		3												
6	Sample 36	3-16-22	1125	Soil	6	X			X	X	X	X	X	X	X	X	X

Relinquished by: (Signature)	Received by: (Signature)	Date: 3-16-22	Time: 1435
Relinquished by: (Signature) 3-16-22 1627	Received by: (Signature)	Date: 3/16/22	Time: 18:27
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:

Petroleum Services Division
3437 Landco Dr.
Bakersfield, California 93308
Tel: 661-325-5657
Fax: 661-325-5808
www.corelab.com

March 29, 2022

Jerald Ancheta
Advanced Technology Laboratories
3275 Walnut Ave
Signal Hill, CA 90755

Subject: Laser Particle Size Analysis
Project: 2200395
CL File No: 2201694

Dear Mr. Ancheta,

The attached file presents the final particle size determination results for the soil sample submitted from your Project #2200395.

Appropriate ASTM, EPA or API methodologies were used for this project and SOP's are available on request. The sample for this project is currently in storage and will be retained for thirty days past completion of testing at no charge. At the end of thirty days, the sample will be disposed. You may contact me regarding continued storage, disposal, or return of the sample.

Thank you for this opportunity to be of service to Advanced Technology Laboratories. Please do not hesitate to contact us at (661-325-5657) if you have any questions regarding these results or if we can be of any additional service.

Sincerely,
Core Laboratories LP

Chris Florence
Sr. Core Analyst

The analyses, opinions or interpretations contained in this report are based upon observations and material supplied by the client for whose exclusive and confidential use this report has been made. The interpretations or opinions expressed represent the best judgment of Core Laboratories. Core Laboratories assumes no responsibility and makes no warranty or representations, expressed or implied, as to the productivity, proper operations or profitableness, however, of any oil, gas, coal or other mineral, property, well or sand in connection with which such report is used or relied upon for any reason whatsoever.

SIEVE and LASER PARTICLE SIZE SUMMARY

(METHODOLOGY: ASTM D422/D4464M)

Petroleum Services

Company: Advanced Technology Laboratories
Project Number: 2200395

CL File No.: 2201694
Date: 3/29/2022

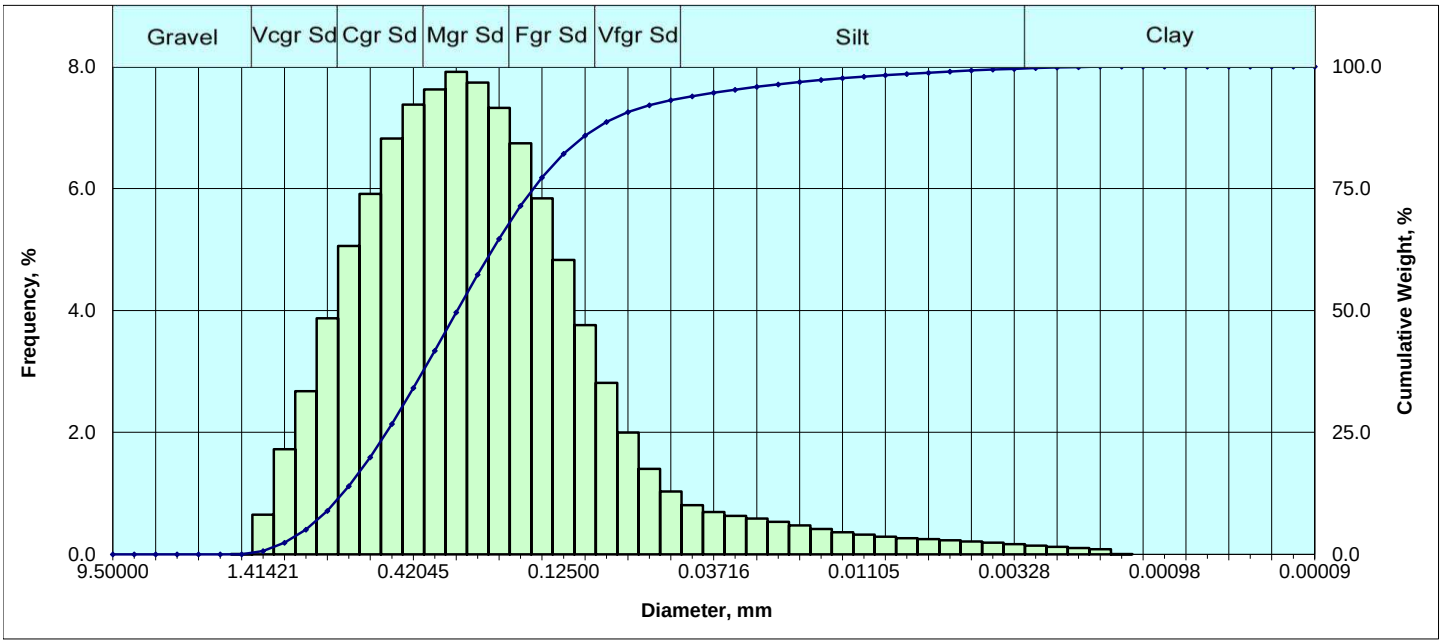
Sample ID	Grain Size Description** (Mean from Folk)	Median Grain Size, mm	Component Percentages								
			Gravel	Sand Size					Silt	Clay	Silt & Clay
				VCoarse	Coarse	Medium	Fine	VFine			
Sample 36	Medium Grain Sand	0.2951	0.00	5.06	21.66	30.65	24.74	9.97	7.30	0.62	7.92

**Wentworth Scale

Company: Advanced Technology Laboratories
Project Number: 2200395

CL File No.: 2201694
Sample ID: Sample 36

Sieve and Laser Particle Size Analysis



Particle Size Distribution

	Diameter [US Mesh]	Diameter [in.]	Diameter [mm]	Diameter [ϕ]	Weight % [Incl.]	Weight % [Cum.]
Gravel	3/8 in.	0.375000	9.50000	-3.25	0.000	0.00
	1/4 in.	0.250000	6.35000	-2.67	0.000	0.00
	4	0.187008	4.75000	-2.25	0.000	0.00
	6	0.131890	3.35000	-1.75	0.000	0.00
	8	0.092913	2.36000	-1.25	0.000	0.00
	10	0.078740	2.00000	-1.00	0.000	0.00
V Crse Sand	12	0.066212	1.68179	-0.75	0.005	0.01
	14	0.055678	1.41421	-0.50	0.652	0.66
	16	0.046819	1.18921	-0.25	1.724	2.38
	18	0.039370	1.00000	0.00	2.676	5.06
Coarse Sand	20	0.033106	0.84090	0.25	3.871	8.93
	25	0.027839	0.70711	0.50	5.056	13.99
	30	0.023410	0.59460	0.75	5.913	19.90
	35	0.019685	0.50000	1.00	6.822	26.72
Medium Sand	40	0.016553	0.42045	1.25	7.375	34.10
	45	0.013919	0.35355	1.50	7.625	41.72
	50	0.011705	0.29730	1.75	7.914	49.63
	60	0.009843	0.25000	2.00	7.738	57.37
Fine Sand	70	0.008277	0.21022	2.25	7.324	64.70
	80	0.006960	0.17678	2.50	6.740	71.44
	100	0.005852	0.14865	2.75	5.841	77.28
	120	0.004921	0.12500	3.00	4.831	82.11
V. Fine Sand	140	0.004138	0.10511	3.25	3.760	85.87
	170	0.003480	0.08839	3.50	2.813	88.68
	200	0.002926	0.07433	3.75	1.999	90.68
	230	0.002461	0.06250	4.00	1.402	92.08
Silt	270	0.002069	0.05256	4.25	1.031	93.11
	325	0.001740	0.04419	4.50	0.808	93.92
	400	0.001463	0.03716	4.75	0.696	94.62
	450	0.001230	0.03125	5.00	0.630	95.24
	500	0.001035	0.02628	5.25	0.587	95.83
	635	0.000870	0.02210	5.50	0.532	96.36
		0.000732	0.01858	5.75	0.473	96.84
		0.000615	0.01562	6.00	0.417	97.25
		0.000517	0.01314	6.25	0.363	97.62
		0.000435	0.01105	6.50	0.321	97.94
		0.000366	0.00929	6.75	0.291	98.23
		0.000308	0.00781	7.00	0.266	98.50
		0.000259	0.00657	7.25	0.248	98.74
		0.000217	0.00552	7.50	0.231	98.97
		0.000183	0.00465	7.75	0.211	99.19
		0.000154	0.00391	8.00	0.190	99.38
Clay		0.000129	0.00328	8.25	0.167	99.54
		0.000109	0.00276	8.50	0.144	99.69
		0.000091	0.00232	8.75	0.123	99.81
		0.000077	0.00195	9.00	0.104	99.91
		0.000065	0.00164	9.25	0.086	100.00
		0.000054	0.00138	9.50	0.001	100.00
		0.000046	0.00116	9.75	0.000	100.00
		0.000038	0.00098	10.00	0.000	100.00
		0.000032	0.00082	10.25	0.000	100.00
		0.000027	0.00069	10.50	0.000	100.00
		0.000023	0.00058	10.75	0.000	100.00
		0.000019	0.00049	11.00	0.000	100.00
		0.000016	0.00041	11.25	0.000	100.00
		0.000015	0.00038	11.50	0.000	100.00
		0.000003	0.00009	13.50	0.000	100.00

Sorting Statistics (Folk)

Parameter	Trask	Inman	Folk
Median	**Medium sand sized**		
(in)	0.0116	0.0116	0.0116
(mm)	0.2951	0.2951	0.2951
Mean	**Medium sand sized**		
(in)	0.0135	0.0109	0.0111
(mm)	0.3417	0.2773	0.2831
Sorting	**Poor**		
	1.812	1.270	1.378
Skewness	**Finely skewed**		
	0.980	0.539	0.175
Kurtosis	**Lepokurtic**		
	0.248	0.930	1.172

Component Percentages

Gravel	Sand	Silt	Clay	Silt + Clay
0.00	92.08	7.30	0.62	7.92

Percentile [Weight, %]	Particle Diameter [in.]	Particle Diameter [mm]	Particle Diameter [phi]
5	0.0395	1.0041	-0.0059
10	0.0320	0.8126	0.2995
16	0.0263	0.6688	0.5804
25	0.0206	0.5238	0.9328
40	0.0145	0.3686	1.4397
50	0.0116	0.2951	1.7609
70	0.0072	0.1839	2.4430
75	0.0063	0.1596	2.6473
84	0.0045	0.1150	3.1205
90	0.0031	0.0791	3.6602
95	0.0013	0.0335	4.8976

**All Grain Sizes Classed Using Wentworth Scale

F

ADVANCED TECHNOLOGY LABORATORIES

SUBCONTRACT ORDER

Work Order: 2200395

SENDING LABORATORY:

Advanced Technology Laboratories
3275 Walnut Avenue
Signal Hill, CA 90755
Phone: 562.989.4045
Fax: 562.989.6348
Project Manager: Jerald Ancheta
(Jerald.Ancheta@atlglobal.com)
Sampler: _Client Sampler

RECEIVING LABORATORY:

Core Laboratories LP
3437 Landco Dr.
Bakersfield, CA 93308
Phone :(661) 325-5657
Fax:
PO#: SC16091

IMPORTANT : Please 'J-Flag' results to MDL. Please include Work Order # and PO # in your invoice.

QC Requirements:
- [x] Routine
- [ ] MS/MSD
- [ ] Caltrans
- [ ] Level IV*
- [ ] DUP
- [ ] Other: _____

TAT Requirements:
- [x] Standard
- [ ] Rush _____ Days
- [ ] Fastest Possible

EDD Requirements:
- [ ] Standard Excel
- [ ] Geotracker EDF
- [ ] EQuis
- [ ] Other: _____

* All Level IV sample containers (including empty ones) must be returned to ATL 30 days after receipt.

Analysis	Expires	Sampled	Comments
ATL Lab#: 2200395-06 / Sample 36 Particle_Size_SUB [Particle Size by Sieve & Laser Methods]	**Soil** 03/30/22 11:25	**03/16/22 11:25** Glass Jar - 8 oz	

Prepared by: [signature] 3/18/22
Sample Control Technician — Date

Inspected by: [signature] 3/18/22
PM Lead / SC Lead — Date

Approved by: Victoria Lidup 03/18/22
Dedicated ATL Project Manager — Date

[signature] 3/18/22 16:00
Released By ATL Sample Control — Date — Time

GLS 3/18/22 16:00
Received By Courier — Date — Time

GLS
Released By Courier — Date — Time

[signature] 3-22-22
Received By Subcontract Laboratory — Date — Time

Released By — Date — Time

Received By — Date — Time

C:\PROGRAM FILES (X86)\PROMIUM\ELEMENT\PRINT\SCO_ATL(A.10).NEW.RPT

OFF-SITE LFM INVESTIGATION WORK PLAN (AMENDED)
SA Recycling LLC
901 New Dock Street, Terminal Island, California

APPENDIX C

Health and Safety Plan

GSI ENVIRONMENTAL INC.

SITE-SPECIFIC HEALTH AND SAFETY PLAN

SA Terminal Island

701 New Dock Street, Terminal Island, CA 90731

GSI Job No.:	6013	Revision No.:	1
Plan Prepared By:	Josh Voss & Don Kubik	Date:	12/02/2021
Plan Reviewed By:	Timothy Wood	Date:	12/02/2021
Plan Approved By:	Don Kubik	Date:	12/02/2021

ACKNOWLEDGEMENT

I, the undersigned, have been provided with a copy of this Site-Specific Health and Safety Plan. I have read the Plan, have attended a project safety orientation session conducted by GSI Environmental Inc. (GSI), and have had the opportunity to ask questions about health and safety issues relating to this project. I understand that it is my responsibility to abide by this Plan, and that physical injury, damage and other harm to myself or others could result from my failure to do so.

Name & Company (please print)	Signature	Date

1.0 SCOPE AND APPLICATION

This Site-Specific Health and Safety Plan (SS-HASP) has been prepared in accordance with 29 CFR §1910.120, 8 CCR 5192 and is a Site-specific supplement to the GSI company Environmental, Health and Safety (EHS) Program Manual for Field Operations (the "EHS Program Manual"), which specifies GSI's general health and safety policies and procedures. This SS-HASP is to be provided to all Site workers under the direction of GSI for their review. In addition, this SS-HASP, the GSI EHS Program Manual, and applicable client safety guidelines will remain on-Site at all times during the project, and will be available to all project personnel upon request from the GSI Site Safety Officer (SSO) or other designated representative.

This SS-HASP specifies health and safety protocol to be followed during implementation of the project work scope by all site personnel under the direction of GSI, including employees and subcontractors. In the event of conflicting standards between this plan or the GSI EHS Program Manual and client health and safety requirements, the more protective standard shall apply. All personnel are required to comply with this SS-HASP and to indicate their agreement to do so by signing the cover page.

2.0 PROJECT DESCRIPTION

2.1 General Information

Client/Site Owner	SA Recycling LLC (SAR)
Project Name and General Description	SA Terminal Island – Light Fibrous Material (LFM) Investigation and Removal
Project Location (Physical Address)	0.5-mile radius of 901 New Dock Street, Terminal, Island, CA 9073 (Figure 1)
Detailed Location Information	The Site occupied by a Pasha Stevedoring & Terminals, LP (PST) facility located at 701 New Dock Street in Terminal Island, California and other nearby properties. The PST facility is located adjacent to the east of SAR's Terminal Island scrap metal shredding and recycling facility.
Start Date/Duration/ Other Schedule Info.	LFM Investigation: 8 November 2021 starting at 7am. LFM Removal following investigation completion.

2.2 Site Description: Provide site description / attach site plan

The Site area is primarily occupied by a PST facility. The California Department of Toxic Substances Control (DTSC) recently collected samples containing LFM at the PST facility, the results of which are presented in DTSC's 1 October 2021 Sampling Report. DTSC's sampling and analysis identified elevated concentrations of some metals in the samples, and polychlorinated biphenyls (PCBs) in the majority of the samples.

In summary, the concentration of zinc exceeded its Total Threshold Limit Concentration (TTLC) of 5,000 milligrams per kilogram (mg/kg) in six (6) of the eight (8) samples (maximum reported concentration of 11,900 mg/kg in SATI-BF-03) and lead exceeded its TTLC of 1,000 mg/kg in 5 of the 8 samples (maximum reported concentration of 1,590 mg/kg in SATI-BF-03). None of the samples collected exceed the TTLC for cadmium. Soluble metals analysis reported lead and

zinc concentrations above their STLCs in each of the 8 samples and cadmium above its STLC in 6 of the 8 samples. No samples exceeded their TCLP limits. PCBs were reported in 7 of the 8 samples at concentrations between 0.87 and 3.09 mg/kg; PCBs were not detected in sample SATI-BF-08.

On 6 October 2021, GSI, SAR, and PST personnel performed a reconnaissance of the western and northern portions of the PST facility to observe DTSC's eight sampling locations, and assess the presence and nature of LFM at those locations and surrounding areas. GSI also collected co-located samples to those collected by DTSC.

GSI primary samples PT01 through PT08, companion samples to DTSC samples SATI-BF-01 through SATI-BF-08, appeared to contain LFM and had concentrations of cadmium, lead, and zinc at generally similar concentrations and relative distribution to DTSC sample analysis.

2.3 Project Tasks: Outline major tasks, attach detailed workplan and/or operating procedures

The project tasks will include the following:

LFM Inspection: GSI will perform reconnaissance of surrounding properties where access is provided to inspect for the presence of LFM.

LFM Removal: Innovative Construction Solutions (ICS; subcontractor to GSI) and/or SAR personnel will perform the removal of LFM. The material will be carefully removed using a combination of hand tools (e.g shovels and brooms) and vacuums. GSI will be on-Site to provide oversight of the removal activities.

Waste Disposal: Waste materials will be containerized and characterized for disposal at an authorized off-Site facility in accordance with applicable local and federal regulations. GSI will assist the client to coordinate disposal of waste at an appropriate facility.

3.0 EMERGENCY RESPONSE PROCEDURES

Specify emergency reporting contact. Provide Plant Emergency Response Contact with phone number(s) where applicable. Call 911 for emergencies located elsewhere.

Report all accidents immediately to:

Timothy Wood (GSI Environmental): (949) 283-5696
Vinnie Robino (GSI Environmental): (949) 422-8586
Jeff Farano (Client Contact – SA Recycling LLC): (714) 471-4411

Describe plant siren/ alarm signals, if applicable, and response

No Site-specific training is necessary on-Site. The Site does not have any specific alarm signals

Location of emergency assembly area(s) and evacuation route

In case of an emergency, assemble near the entrance to of the PST facility.

Describe other applicable emergency response measures to be taken (decontamination and/or medical treatment)

In case of an emergency, call 911

Location and phone number of nearest urgent care facility (Map Attached; Figure 2)

The nearest urgent care facility is the **Concentra Urgent Care**, 3.1 mile from the Site (approximately 7-minute drive time, dependent on traffic). Directions to the urgent care are as follows:

1. Head east on New Dock St
2. Turn right onto Pier S Ave
3. Pier S Ave turns left and becomes CA-47 N
4. Use the 2nd from the right lane to take the ramp to I-710 N
5. Keep left at the fork and merge onto I-710 N
6. Take exit 1E toward Downtime
7. Continue on W Ocean Blvd
8. Turn right onto World Trade Center and the destination will be on the left.

Concentra Urgent Care
100 Oceangate P245
Long Beach, CA 90802

Phone
Phone number: (562) 432-2821

Hours
Monday through Friday – 7AM to 6PM
Saturday & Sunday – Closed

Refer to Figure 2 – Urgent Care Location Map.

Location and phone number of nearest hospital with emergency room (Map attached; Figure 3)

The nearest hospital with an emergency room is the **Dignity Health – St. Mary Medical Center**, 4.7 miles from the site (approximately 16-minute drive time, dependent on traffic). Directions to the hospital are as follows:

1. Head east on New Dock St
2. Turn right onto Pier S Ave
3. Pier S Ave turns left and becomes CA-47 N
4. Use the 2nd from the right lane to take the ramp to I-710 N
5. Keep left at the fork and merge onto I-710 N
6. Take exit 1E toward Downtime
7. Continue on W Ocean Blvd
8. Turn left onto Long Beach Blvd
9. Turn right onto E 10th St
10. Turn left onto Elm Ave
11. Turn right onto Linden Ave and the destination will be on the right.

Dignity Health – St. Mary Medical Center
1050 Linden Ave
Long Beach, CA 90813

Phone
Emergency Center (562) 491-9000
Hospital Information (562) 491-9000

Refer to Figure 3 – Hospital Location Map.

4.0 Project Organization, Personnel, & Training Requirements

4.1 Key Personnel

Position	Name	Phone (Cell Phone)
GSI Principal-in-Charge (PIC)	Timothy Wood, PG, CHG	(949) 679-1070 (949) 283-5696 (cell)
GSI Project Team Leader (PTL)	Vinnie Robino, PG	(949) 679-1070 (949) 422-8586 (cell)
GSI Site-Safety Officer (SSO)	Bianca Mintz	(808) 561-0775 (cell)
GSI SoCal H&S Representative	Josh Voss	(815) 451-1369 (cell)
GSI Certified Industrial Hygienist	Don Kubik Jr., PG, CIH, CIT	(815) 451-1369 (cell)
Client Contact	Jeff Farano Sr.	(714) 471-4411 (cell)
Site Contact	Todd Peterson	(360) 556-8530 (cell)
ICS Project Manager	John White	(714) 240-1229 (cell)

4.2 Training Requirements – Check all that apply and list any additional

X	OSHA 40-hr HAZWOPER	X	OSHA 8-hr Annual Refresher
	Contractor Safety Council (CSC) – Basic +		TWIC Card
	Site-Specific (CSC or on-site)		
	Unit-Specific		

4.3 Requirements for Respirator Use

Will respirator use potentially be required? X_____Yes _____No

If yes, GSI Respiratory Protection Plan, found in Section 6.0 of the GSI HASP, is applicable. Affected personnel must have physician's written opinion certifying fitness to use respirator based on pulmonary function test and other considerations, be trained in proper respirator use, and have quantitative fit test.

4.4 Personnel Documents

All field project personnel, including subcontractors, are to maintain training and medical records at their respective offices and provide to GSI if requested. OSHA 40-hour HAZWOPER training with 8-hour refresher courses is required of all field personnel.

5.0 POTENTIAL HAZARDS & HAZARD CONTROL MEASURES

5.1 General Site Access Control

The work zone will be kept clear of unnecessary materials. If necessary, caution tape will be put around the work areas to demarcate an area where unauthorized personnel are not allowed to enter. The GSI Site Safety Officer will be responsible for preventing unauthorized persons from entering the work area when on-Site.

5.2 Project Personnel Access Control

Sign in and out with the GSI Site Safety Officer.

5.3 Underground Utilities Clearance

Specify procedures for obtaining clearance of locations for drilling, excavation, or other subsurface penetrations. Utility clearance will include at least a 48-hour notification to Underground Service Alert (USA) of California, the state underground utility notification authority. Below are the color designations to be used by the underground utilities surveyor.

WHITE – PROPOSED EXCAVATION

PINK – TEMPORARY SURVEY MARKINGS

RED – ELECTRIC POWER LINES, CABLES, CONDUIT AND LIGHTING CABLES

YELLOW – GAS, OIL, STEAM, PETROLEUM OR GASEOUS MATERIALS

ORANGE – COMMUNICATION, ALARM OR SIGNAL LINES, CABLES OR CONDUIT

BLUE – POTABLE WATER

PURPLE – RECLAIMED WATER, IRRIGATION AND SLURRY LINES

GREEN – SEWERS AND DRAIN LINES

5.4 General Work Hazards and Avoidance

General work hazards include slip, trip, and fall hazards, head or foot injuries from falling or dropped objects, strains from over-exertion or incorrect lifting, electrical shocks, etc. These hazards can be controlled by good housekeeping measures and safe work practices, as outlined below. See also GSI HASP.

Housekeeping Measures:

- Excess brush or high vegetation should be cleared from the work area to the extent practical prior to start of the job.
- The job Site must be kept clean and free of trash and debris. Trash will be placed in bags or other suitable containers when generated. Disposable PPE must be disposed in designated containers upon removal.
- Materials such as lumber, cement, etc. will be neatly stored in a designated area.
- Tools and equipment must be returned to the tool box or designated area when no longer in use.

General Safe Work Practices:

- Use buddy system.
- Stay alert at all time to activities in your surroundings. Watch for on-coming vehicles, other workers, and overhead hazards.
- Work at a deliberate pace; do not rush a job.
- Avoid heavy lifting and lift with knees bent.
- Use tools only for their intended use, and make sure tools are in good condition. Inspect power tool and extension cords prior to use.
- Maintain safe distance (at least 10 feet and an additional 4 inches for every 10 kilovolts (kV) over 50 kV) between drill rig mast or other overhead equipment and overhead lines.
- Avoid unauthorized entry to restricted areas including confined space areas.
- Do not operate plant process equipment; do not open or close valves

- Proper PPE (specified below) must be worn at all times. PPE must be inspected regularly and properly maintained.
- Remove gloves and wash hands before handling food or tobacco products.

5.5 Fire and Explosion Hazard Mitigation

- Gasoline and other fuels must be stored in steel safety cans with mesh flame arresters and spring-mounted relief vent mechanisms. Flammable and combustible materials including paints and solvents must be properly stored away from sources of ignition.
- Fire extinguishers must be present on all vehicles, and drilling and excavation equipment, and in all areas where spark producing equipment is in use.

Other Measures (check as applicable):

_X_ Smoking permitted only in designated areas, or
____ Smoking not permitted
____ Matches and lighters not permitted onsite
____ Hot-work permits must be obtained for spark-producing equipment in designated areas
____ Other _____

5.6 Heat-Related Disorders

The major varieties of heat-related disorders, their related symptoms and appropriate treatment are listed below in order of increasing severity.

Condition & Related Symptoms	Heat Stress	Heat Exhaustion or Heat Syncope	Heat Stroke
Cramping	May be present	May be present	Absent
Mental State	Faint, dizzy, fatigue	May be disoriented	Stupor or coma
Skin & Complexion	Cool, moist, flush; rash may be present.	Cool, pale, moist	Red, hot, dry
Temperature	Normal	Normal to low	Very high (>105° F)
Pulse	Rapid (>110 beat /min)	Rapid, weak	Rapid, bounding
Blood Pressure	May be low	May be low	May be high in early stages
Treatment	Give water & electrolytes, loosen or remove clothing, move to shade	Give water & electrolytes, loosen or remove clothing, move to shade	Provide rapid cooling by immersion; cover in wet cloth and transport to emergency room

Prevention Measures: All heat disorders are caused by loss of fluids and the body's inability to cool itself. Heat stress can be prevented by the following measures:

- Pre-hydrate before going into the field: water or water-electrolyte drinks are preferable to caffeinated beverages or soft drinks. Refrain from alcohol the night before field work.
- In the field drink frequently. Numerous small drinks at a tepid temperature are better than rapid, large volume intakes of iced drinks.
- Rest at least a few minutes every hour or two.
- Observe co-workers for signs of heat stress.

OSHA identifies the following Risk Levels for given values of the heat index and recommends increasing Protective Measures to be implemented at each level.

Heat Index	Risk Level	Protective Measures
< 91° F	Lower (Caution)	Basic heat safety and planning
91° to 103° F	Moderate	Implement precautions and heighten awareness
103° to 115° F	High	Additional precautions to protect workers
> 115° F	Very High to Extreme	Aggressive measures (e.g., reschedule non-essential work)

5.7 Heavy Equipment Operations

During removal activities, heavy equipment must be in good condition, if used. Particular attention should be paid to the condition of cables and hoisting equipment. The equipment must be equipped with a back-up beeper. Barricades or caution tape should be used as needed to exclude unauthorized personnel from the work area.

During removal activities, equipment should be positioned to allow for adequate work room and the area kept free of trip and slip hazards. Care must be taken to avoid the catching of loose clothing in moving parts, and to keep hands free of pinch points. Proper PPE including hard hat, safety glasses, gloves, hearing protection, and safety shoes must be worn.

All vehicles or mechanical equipment that may have all or parts of its structure near energized overhead lines should maintain an operating distance of at least 10 feet of clearance with distance increased by 4 inches for every 10 kV over 50kV.

All heavy equipment must employ the warning methods while the vehicle is backing up, as described in 8 CCR 1592, including:

- Automatic back-up alarm;
- Automatic braking device;
- A spotter directing the vehicle;
- Inspection of the entire perimeter of the vehicle prior to backing up; and/or
- Prohibiting foot traffic in the work area.

5.8 Confined Space and Excavation Safety

All personnel must obey all posted restrictions on entry to confined spaces. Excavations deeper than 4 ft should not be entered for any purpose unless 1) the excavation walls are properly shored or are sloped at a 1:1 slope, or less steep, and there is no danger of collapse or engulfment; 2) a suitable means of egress such as ramp, stairs or ladder is located so as to require no more than 25 ft of lateral travel to reach it; and 3) testing demonstrates a hazardous atmosphere is not present.

5.9 Potential Chemical Exposure Hazards

Chemicals of potential concern (COPCs) are potential chemical exposure hazards that field personnel should be aware of removal and are discussed in Section 2.2. Based on previous sampling results for samples collected by DTSC and GSI, PCBs, cadmium, lead, and zinc are considered COPCs.

The table below summarizes primary COPCs, and the maximum expected concentrations in soil and/or water, to the extent known. NIOSH Pocket Guide printouts are provided in Attachment 2.

Constituents of Concern (COCs)	Exposure Limits[1]			I.P.	Max. Expected Concentration or Free-Phase (FP)		Health Hazard Target Organ Route of Entry
Chemical Name/ CAS No.	**PEL/ TLV (mg/m^3)**	**STEL (mg/m^3)**	**IDLH[2] (mg/m^3)**	**(e.V)**	**Soil (mg/kg)**	**Water (mg/L)**	Ca = Carcinogen Abs = Skin Absorption Con = Skin or Eye Contact Inh = Inhalation Ing = Ingestion
Cadmium [7440-43-9]	0.005	NA[3]	50	NPV[4]	29	UNK[5]	Inh, Ing
Lead [7439-92-1]	0.050	NA	100	NPV	1,590	UNK	Inh, Ing, Con
Zinc [1314-13-2]	5	NA	500	NPV	11,900	UNK	Inh
PCBs [53469-21-9]	1	NA	10	NPV	1.93	UNK	Ca, Inh, Ing, Abs, Con

1 Unless otherwise noted, Permissible Exposure Limits (PEL) and Threshold Limit Values (TLVs) are permissible time-weighted average exposure limits (ppm in air), which must not be exceeded for an 8-hour work-day/40-hour work week. Short-Term Exposure Limits (STELs) must not be exceeded over a 15-minute period.
2 IDLH = Immediately Dangerous to Life or Health; must not be exceeded at any time.
3 NA = Not available or not applicable
4 NPV = No published value
5 UNK = Unknown
6 Exposure limits and associated health hazards can be found in the NIOSH Pocket Guide to Chemical Hazards and the ACGIH Guide to TLVs and BEIs.

The following equation can be used to estimate an 8-hour maximum hypothetical time weighted average concentration of COPCs in air.

$$\text{Dust AL(for one dust)} = EL/(\ COPC_{LFM}\ \times SF \times 10^{-6}\ (kg/mg))$$

$$\text{Dust AL (for mixed dusts)} = (10^{-6}\ (kg/mg)/SF)\ /\text{Sum of}\ (\ COPC_{LFM}\ /EL)$$

where:
Dust AL = dust action level [mg/m_3]
EL = exposure limit (Cal/OSHA PEL) [mg/m^3]
SF = safety factor of 1 [unitless]
$COPC_{LFM}$ = representative COPC concentration in LFM [mg/kg]

Using the maximum concentrations in the table above, airborne concentrations of the LFM would need to be in excess of 25 mg/m^3 to reach the PELs of the COPCs.
Based on this information, maintaining dust levels below the Cal/OSHA PELs for particulates (10 mg/m^3 for total dust and 5 mg/m^3 for respirable fraction) would keep workers well under the Cal/OSHA regulatory enforceable PEL for the COPCs.

To minimize potential chemical exposure, the following measures will be taken:

- SDS must be provided for any chemical brought on-site for project use.
- Workers should remain upwind of contaminated materials to the extent practical.
- PPE specified below will be worn prevent skin or eye contact with constituents.
- Air quality monitoring will be conducted and respiratory protective equipment used as needed, as described below.
- Eating, drinking, smoking, gum chewing and oral tobacco use are not permitted in areas where chemical exposure could occur.

- Workers must remove gloves in the work area and drink from a water source outside the immediate work zone.
- PPE must be removed and hands thoroughly washed prior to breaking for meals.

5.10 Other Potential Hazards

During removal activities, make sure proper PPE (level D) is worn (hard hat, steel-toe boots with appropriate traction, safety glasses, gloves, ear protection). A N95 particulate mask should be worn as well during removal activities. Be careful when moving around heavy equipment. To prevent heat-related illness, take frequent breaks and drink plenty of fluids throughout the day.

Dust may be generated during removal activities. Dust control measures will be implemented to minimize dust generation. General dust control measures will include:

- sprinkling water to maintain soil moisture during removal and loading activities;
- covering all containers with soil;
- sweeping work areas if visible soil material is present;
- restricting non-essential traffic in the project area;
- minimizing drop heights while loading containers; and
- covering exposed affected soil or stockpiles with secured plastic sheeting.

COVID-19

Due to the outbreak of the novel Coronavirus Disease 2019 (COVID-19), GSI's Pandemic Disease Plan (Addendum) will be implemented for GSI employees and subcontractors (Attachment 3). Please review to the Addendum appended to the GSI Employee Procedures Handbook: Appendix H and attached to this SS-HASP. GSI field staff will review the COVID-19 Addendum before field work begins each day at the daily tail-gate meeting. Below is a list of Site-specific COVID-19 guidance:

- There are no Site-specific COVID-19 screening requirements. GSI staff will be traveling to and from the Site in separate vehicles.
- Face masks may be required to be worn in California when social distancing (separation of 6 feet or more) is not attainable and therefore GSI staff and subcontractors should wear face coverings when within 6 feet of other field personnel.
- Each GSI and subcontractor personnel are required to bring their own face covering such as cloth masks to the Site.

6.0 AIR QUALITY MONITORING

Dust monitoring will initially be conducted to verify that dust concentrations are below the Cal/OSHA PELs for total and respirable particulates and that N95 particulate masks provide adequate respiratory protection. Monitoring will be conducted using a portable dust monitor such as a TSI DUSTTRAK Aerosol monitor. Field personnel will perform dust monitoring during initial LFM cleanup activities, which will begin in the western portion of the PST facility, closest to the SATI facility where LFM deposits have been observed. Initial dust monitoring will be performed in the breathing zone during LFM removal actions. The Site Safety Officer will verify that all instruments are operating correctly before they are brought to the Site. Background dust measurements will be collected at the start of the work period and at least once later during work activities, preferably upwind from the work area. Based on initial dust monitoring, dust control measures and the respirator protection program will be adjusted, if necessary.

7.0 PERSONAL PROTECTIVE EQUIPMENT (PPE)

7.1 Level D PPE

A minimum of Level D PPE is required for all site personnel at all times, upgraded as necessary depending on task and conditions. Basic Level D PPE shall include the following elements: **1)Hard Hat** (w/ mono goggles); **2)Safety Glasses** (w/side shields); **3)Safety Shoes** (w/steel toes); **4)Body Covering** (long pants, shirt w/ sleeves, collar). Basic Level D equipment will be supplemented as follows:

7.2 Supplemental Level D PPE

	Item	**When/Where to be Used**
	Flame Retardant Clothing (FRC)	
X	Hearing Protection	Around heavy machinery
X	Work gloves	When using hand tools
	Latex or vinyl surgical gloves	
X	Neoprene or Nitrile gloves	When handling or removing LFM
X	Tyvek Coveralls	Have available if needed
	Polycoat Tyvek Coveralls	
	Chemical-resistant boots	
	Face Shield	
X	Face Coverings (COVID-19 related)	As required by State or County guidelines
X	N95 facepiece respirators	During LFM removal operations

During LFM removal operations, NIOSH-approved N95 particulate filtering facepiece respirators will be worn in accordance with GSI's or the respective contractor's Respiratory Protection Program. If particulate monitoring indicates that exposure to particulates is below the PELs, this requirement may be modified by the Site Safety Officer.

8.0 DECONTAMINATION PROTOCOL

Specify procedures for personnel decontamination and management of disposable PPE.

Personal Decontamination: Wash hands thoroughly before leaving the Site or eating. Disposable PPE (e.g. nitrile gloves) will be disposed in trash bags and disposed appropriately.

Equipment Decontamination: Disposable equipment (gloves, etc.) will be disposed appropriately. Removal equipment will be decontaminated by subcontractor, as needed. Reusable equipment will be decontaminated using a solution of laboratory-grade detergent (such as Alconox) and potable water and rinsed with potable water. Investigation derived waste (i.e., tubing, paper towels, etc.) will be placed in trash bags, and disposed according to state and local regulations. Additionally, visqueen or plastic sheeting will be laid down in the work area to help prevent cross decontamination and keep the work area clean.

Specify procedures for response to non-emergency chemical release.

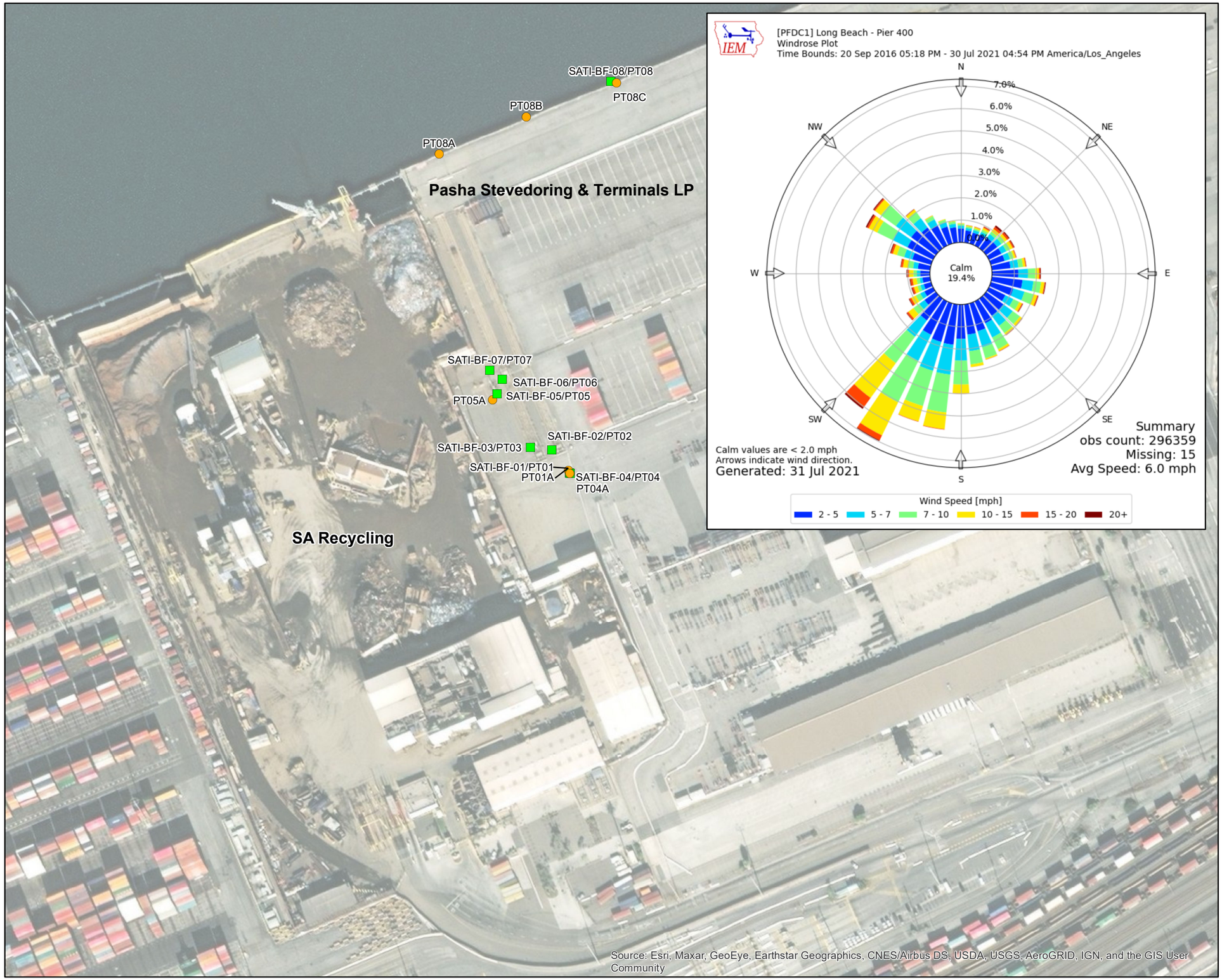
Although a non-emergency chemical release is not anticipated for this job, if one occurs, work will stop immediately, and the chemical will be cleaned up with rags or an appropriate absorbent material and disposed of in the IDW drum or separate drum as appropriate. Additionally, the SSO will contact the GSI Health & Safety Coordinator.

9.0 ADDITIONAL INFORMATION

Provide any additional information, procedures, or instructions as needed.

GSI will conduct a review of the site-specific Health and Safety Plan with subcontractors and other personnel on-Site before the project is started. The SSO will record items discussed on the Daily Site Safety Record (Attachment 1). As a means of tracking attendance, all site personnel are expected to review and sign the HASP. The SSO will track on-Site / off-Site times on the Daily Site Safety Record. After lunch each day, GSI will hold a brief meeting to discuss any safety issues encountered during the morning hours that needs to be addressed in the afternoon, and to refresh all field personnel on the safety issues associated with the project tasks.

At the conclusion of each workday, the SSO will complete the Daily Site Safety Record form (Attachment 1).



N

LEGEND

- Sample Location (GSI, October 6, 2021)
- Sample Location (DTSC, September 1, 2021)

Notes

1) Aerial imagery provided by Esri ArcGIS Online, November 2020.
2) Windrose plot downloaded from: https://mesonet.agron.iastate.edu/sites/windrose.phtml?station=PFDC1&network=CA_DCP, on October 14, 2021.

Feet
0 100 200

Projected Coordinate System
Datum: NAD 83
State Plane California Zone V
Units: Feet

GSI ENVIRONMENTAL

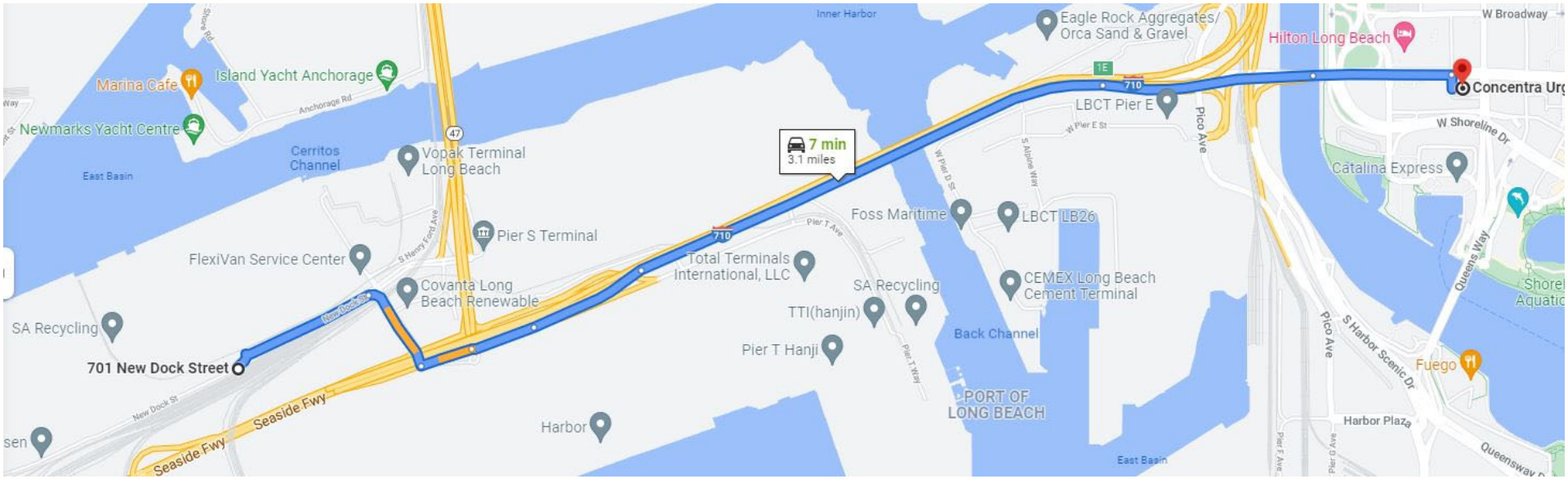
SAMPLE LOCATIONS & WIND SPEED AND DIRECTION

Pasha Stevedoring & Terminals LP
701 New Dock Street, San Pedro, California

GSI Job No.	6013	Drawn By:	AV
Issued:	14-Oct-2021	Chk'd By:	CH
Map ID:	SATI_SampLocsP400	Appv'd By:	TFW

FIGURE 1

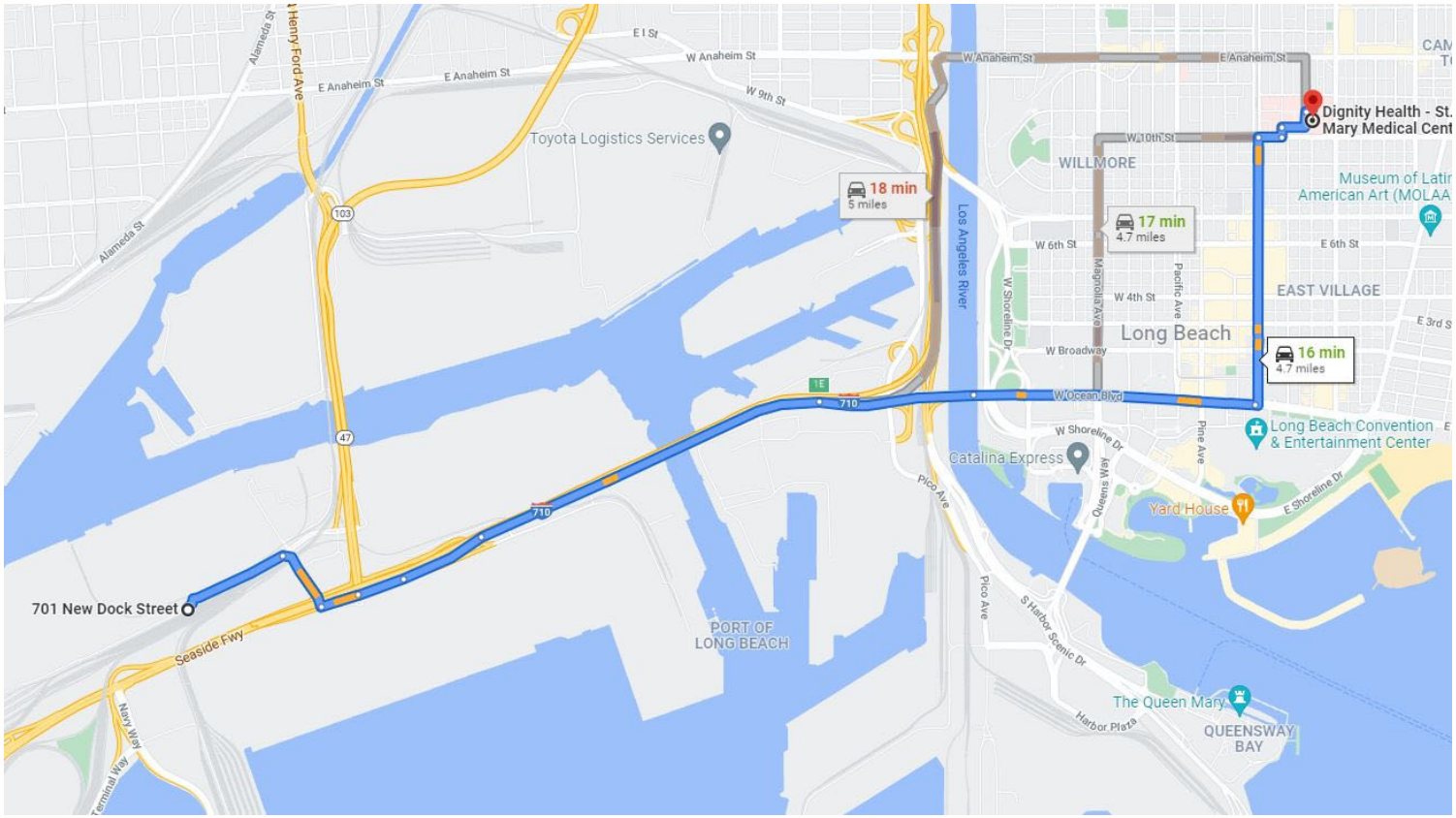
Collected via Google Maps:



1. Head east on New Dock St
2. Turn right onto Pier S Ave
3. Pier S Ave turns left and becomes CA-47 N
4. Use the 2nd from the right lane to take the ramp to I-710 N
5. Keep left at the fork and merge onto I-710 N
6. Take exit 1E toward Downtime
7. Continue on W Ocean Blvd
8. Turn right onto World Trade Center and the destination will be on the left.

GSI ENVIRONMENTAL	GSI Job No. 6013 Issued: 10/21/21 Revised: Scale: Not To Scale	Google.com/maps	FIGURE 2 URGENT CARE LOCATION MAP Concentra Urgent Care 100 Oceangate p245, Long Beach, CA 90802

Collected via Google Maps:



1. Head east on New Dock St
2. Turn right onto Pier S Ave
3. Pier S Ave turns left and becomes CA-47 N
4. Use the 2nd from the right lane to take the ramp to I-710 N
5. Keep left at the fork and merge onto I-710 N
6. Take exit 1E toward Downtime
7. Continue on W Ocean Blvd
8. Turn left onto Long Beach Blvd
9. Turn right onto E 10th St
10. Turn left onto Elm Ave
11. Turn right onto Linden Ave and the destination will be on the right.

GSI ENVIRONMENTAL	GSI Job No. 6013 Issued: 10/21/21 Revised: Scale: Not To Scale	Google.com/maps	FIGURE 3 HOSPITAL LOCATION MAP Dignity Health – St. Mary Medical Center 1050 Linden Ave, Long Beach, CA 90813

GSI ENVIRONMENTAL INC.

DAILY TAILGATE SAFETY MEETING

Project/Location: _____ GSI Job No._____

_____ Page 1 of 1

Site Safety Officer:_____ Date: _____

Meeting Conducted By: _____

Meeting Attended By:

NAME	COMPANY	SIGNATURE

_____Additional Personnel (See Next Page)

Tasks to be Performed:

Potential Hazards and Hazard Avoidance Measures:

Mechanical Hazards:

Heat Stress:

Chemical Exposure:

Biological Hazards:

Other:

GSI ENVIRONMENTAL INC.

DAILY SITE SAFETY RECORD

Project: _____ GSI Job No.: _____

Location: _____ Date: _____

Page 1 of _____

Field Personnel:

Name	Company	Time Onsite-Offsite	Time Onsite-Offsite
1)			
2)			
3)			
4)			
5)			

_____Additional Personnel (Attach additional sheets as needed.)

Work Item/Personal Protective Equipment Level:

Task: _____ PPE: _____

Task: _____ PPE: _____

Task: _____ PPE: _____

Air Quality Monitoring: _____ Required (See record on next page.) _____ Not Required

Safety Awareness Issues Discussed: _____

_____

_____

Site Safety Officer: _____ Confirmation: *"I have visually inspected the site for proper housekeeping, absence of slip or trip hazards, etc."*

Signature: _____ Date: _____

HEAVY EQUIPMENT USE (IF APPLICABLE)

Type of Equipment & Model: _____ Owned: _____ Rented: _____

Certification: *"I have been properly trained on the use of this equipment. I have inspected this equipment and confirmed it to be in good working condition."*

Signature: _____ Date: _____

ACCIDENTS/INJURIES/INCIDENTS

(Description of incident and actions taken. Attach additional sheets as needed.)

_____

_____

GSI ENVIRONMENTAL INC.

DAILY SITE SAFETY RECORD

GSI Job No._____
Page 2 of_____
Date _____

Air Quality Monitoring:

_____Photo Ionizing Detector (PID)
Calibration Check:
(95 ppm Methane Gas)

_____Other (Specify) _____
10 X Scale Reading (ppm)_____
100 X Scale Reading (ppm)_____

Time	Activity	Sample Point	Reading* (ppm)

* Reading above background, sustained for 1 minute period.

Action Level _____ ppm Action Level Exceeded?_____

Action Taken _____

Remarks _____

Centers for Disease Control and Prevention

Promoting productive workplaces through safety and health research NIOSH

Synonyms & Trade Names

Cadmium metal

CAS No.

7440-43-9 (metal)

RTECS No.

EU9800000 (metal)

DOT ID & Guide

2570 154(cadmium compound)

Formula

Cd (metal)

Conversion

IDLH

Ca [9 mg/m^3 (as Cd)]
See: 7440439

Exposure Limits

NIOSH REL
Ca See Appendix A [*Note: The REL applies to all Cadmium compounds (as Cd).]
OSHA PEL
[1910.1027] TWA 0.005 mg/m^3 [*Note: The PEL applies to all Cadmium compounds (as Cd).]

Measurement Methods

NIOSH 7048 , 7300 , 7301 , 7303 , 9102;
OSHA ID121 , ID125G , ID189 , ID206
See: NMAM or OSHA Methods

Physical Description

Metal: Silver-white, blue-tinged lustrous, odorless solid.

Molecular Weight	Boiling Point	Melting Point	Solubility	Vapor Pressure	Ionization Potential
112.4	1409°F	610°F	Insoluble	0 mmHg (approx)	NA

Specific Gravity	Flash Point	Upper Explosive Limit	Lower Explosive Limit		
8.65 (metal)	NA	NA	NA		

Metal: Noncombustible Solid in bulk form, but will burn in powder form.

Incompatibilities & Reactivities

Strong oxidizers; elemental sulfur, selenium & tellurium

Exposure Routes

inhalation, ingestion

Symptoms

pulmonary edema, dyspnea (breathing difficulty), cough, chest tightness, substernal (occurring beneath the sternum) pain; headache; chills, muscle aches; nausea, vomiting, diarrhea; anosmia (loss of the sense of smell), emphysema, proteinuria, mild anemia; [potential occupational carcinogen]

Target Organs

respiratory system, kidneys, prostate, blood

Cancer Site

[prostatic & lung cancer]

Personal Protection/Sanitation

(See protection codes)
Skin: No recommendation
Eyes: No recommendation
Wash skin: Daily
Remove: No recommendation
Change: Daily

First Aid

(See procedures)
Eye: Irrigate immediately
Skin: Soap wash
Breathing: Respiratory support
Swallow: Medical attention immediately

Respirator Recommendations

(See Appendix E)

NIOSH

At concentrations above the NIOSH REL, or where there is no REL, at any detectable concentration:
(APF = 10,000) Any self-contained breathing apparatus that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode
(APF = 10,000) Any supplied-air respirator that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary self-contained positive-pressure breathing apparatus

Escape:

(APF = 50) Any air-purifying, full-facepiece respirator with an N100, R100, or P100 filter.
Click here for information on selection of N, R, or P filters.

Any appropriate escape-type, self-contained breathing apparatus

Important additional information about respirator selection

See also

INTRODUCTION ICSC CARD: 0020 MEDICAL TESTS: 0035

Page last reviewed: October 30, 2019

Centers for Disease Control and Prevention

Promoting productive workplaces through safety and health research NIOSH

Synonyms & Trade Names

Lead metal, Plumbum

CAS No.

7439-92-1

RTECS No.

OF7525000

DOT ID & Guide

Formula

Pb

Conversion

IDLH

100 mg/m^3 (as Pb)
See: 7439921

Exposure Limits

NIOSH REL
TWA (8-hour) 0.050 mg/m^3 See Appendix C [*Note: The REL also applies to other lead compounds (as Pb) -- see Appendix C.]
OSHA PEL
[1910.1025] TWA 0.050 mg/m^3 See Appendix C [*Note: The PEL also applies to other lead compounds (as Pb) -- see Appendix C.]

Measurement Methods

NIOSH 7082 , 7105 , 7300 , 7301 , 7303 , 7700 , 7701 , 7702 , 9100 , 9102 , 9105;
OSHA ID206 , ID121 , ID125G
See: NMAM or OSHA Methods

Physical Description

A heavy, ductile, soft, gray solid.

Molecular Weight	Boiling Point	Melting Point	Solubility	Vapor Pressure	Ionization Potential
207.2	3164°F	621°F	Insoluble	0 mmHg (approx)	NA

Specific Gravity	Flash Point	Upper Explosive Limit	Lower Explosive Limit		
11.34	NA	NA	NA		

Noncombustible Solid in bulk form.

Incompatibilities & Reactivities

Strong oxidizers, hydrogen peroxide, acids

Exposure Routes

inhalation, ingestion, skin and/or eye contact

Symptoms

lassitude (weakness, exhaustion), insomnia; facial pallor; anorexia, weight loss, malnutrition; constipation, abdominal pain, colic; anemia; gingival lead line; tremor; paralysis wrist, ankles; encephalopathy; kidney disease; irritation eyes; hypertension

Target Organs

Eyes, gastrointestinal tract, central nervous system, kidneys, blood, gingival tissue

Personal Protection/Sanitation

(See protection codes)
Skin: Prevent skin contact
Eyes: Prevent eye contact
Wash skin: Daily
Remove: When wet or contaminated
Change: Daily

First Aid

(See procedures)
Eye: Irrigate immediately
Skin: Soap flush promptly
Breathing: Respiratory support
Swallow: Medical attention immediately

Respirator Recommendations

(See Appendix E)
NIOSH/OSHA

Up to 0.5 mg/m^3:
(APF = 10) Any air-purifying respirator with an N100, R100, or P100 filter (including N100, R100, and P100 filtering facepieces) except quarter-mask respirators.
Click here for information on selection of N, R, or P filters.
(APF = 10) Any supplied-air respirator

Up to 1.25 mg/m^3:
(APF = 25) Any supplied-air respirator operated in a continuous-flow mode
(APF = 25) Any powered, air-purifying respirator with a high-efficiency particulate filter.

Up to 2.5 mg/m^3:

(APF = 50) Any air-purifying, full-facepiece respirator with an N100, R100, or P100 filter.
Click here for information on selection of N, R, or P filters.

(APF = 50) Any supplied-air respirator that has a tight-fitting facepiece and is operated in a continuous-flow mode
(APF = 50) Any powered, air-purifying respirator with a tight-fitting facepiece and a high-efficiency particulate filter
(APF = 50) Any self-contained breathing apparatus with a full facepiece
(APF = 50) Any supplied-air respirator with a full facepiece

Up to 50 mg/m^3:
(APF = 1000) Any supplied-air respirator operated in a pressure-demand or other positive-pressure mode

Up to 100 mg/m^3:
(APF = 2000) Any supplied-air respirator that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode

pressure mode

Emergency or planned entry into unknown concentrations or IDLH conditions:
(APF = 10,000) Any self-contained breathing apparatus that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode
(APF = 10,000) Any supplied-air respirator that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary self-contained positive-pressure breathing apparatus

Escape:

(APF = 50) Any air-purifying, full-facepiece respirator with an N100, R100, or P100 filter.
Click here for information on selection of N, R, or P filters.

Any appropriate escape-type, self-contained breathing apparatus

Important additional information about respirator selection

See also

INTRODUCTION ICSC CARD: 0052 MEDICAL TESTS: 0127

Page last reviewed: October 30, 2019

Centers for Disease Control and Prevention

Promoting productive workplaces through safety and health research NIOSH

Synonyms & Trade Names

Zinc peroxide

CAS No.

1314-13-2

RTECS No.

ZH4810000

DOT ID & Guide

1516 143

Formula

ZnO

Conversion

IDLH

500 mg/m^3
See: 1314132

Exposure Limits

NIOSH REL
Dust: TWA 5 mg/m^3 C 15 mg/m^3
Fume: TWA 5 mg/m^3 ST 10 mg/m^3
OSHA PEL
TWA 5 mg/m^3 (fume) TWA 15 mg/m^3 (total dust) TWA 5 mg/m^3 (resp dust) See Appendix G

Measurement Methods

NIOSH 7303 , 7502;
OSHA ID121 , ID143
See: NMAM or OSHA Methods

Physical Description

White, odorless solid.

Molecular Weight	Boiling Point	Melting Point	Solubility	Vapor Pressure	Ionization Potential
81.4	?	3587°F	(64°F): 0.0004%	0 mmHg (approx)	NA

Specific Gravity	Flash Point	Upper Explosive Limit	Lower Explosive Limit		
5.61	NA	NA	NA		

Noncombustible Solid

Incompatibilities & Reactivities

Chlorinated rubber (at 419°F), water [Note: Slowly decomposed by water.]

Exposure Routes

inhalation

Symptoms

Metal fume fever: chills, muscle ache, nausea, fever, dry throat, cough; lassitude (weakness, exhaustion); metallic taste; headache; blurred vision; low back pain; vomiting; malaise (vague feeling of discomfort); chest tightness; dyspnea (breathing difficulty), rales, decreased pulmonary function

Target Organs

respiratory system

Personal Protection/Sanitation

(See protection codes)
Skin: No recommendation
Eyes: No recommendation
Wash skin: No recommendation
Remove: No recommendation
Change: No recommendation

First Aid

(See procedures)

Breathing: Respiratory support

Respirator Recommendations

NIOSH/OSHA

Up to 50 mg/m^3:
(APF = 10) Any particulate respirator equipped with an N95, R95, or P95 filter (including N95, R95, and P95 filtering facepieces) except quarter-mask respirators. The following filters may also be used: N99, R99, P99, N100, R100, P100.
Click here for information on selection of N, R, or P filters.
(APF = 10) Any supplied-air respirator

Up to 125 mg/m^3:
(APF = 25) Any supplied-air respirator operated in a continuous-flow mode
(APF = 25) Any powered, air-purifying respirator with a high-efficiency particulate filter.

Up to 250 mg/m^3:

(APF = 50) Any air-purifying, full-facepiece respirator with an N100, R100, or P100 filter.
Click here for information on selection of N, R, or P filters.

(APF = 50) Any supplied-air respirator that has a tight-fitting facepiece and is operated in a continuous-flow mode
(APF = 50) Any powered, air-purifying respirator with a tight-fitting facepiece and a high-efficiency particulate filter
(APF = 50) Any self-contained breathing apparatus with a full facepiece
(APF = 50) Any supplied-air respirator with a full facepiece

Up to 500 mg/m^3:
(APF = 1000) Any supplied-air respirator operated in a pressure-demand or other positive-pressure mode

Emergency or planned entry into unknown concentrations or IDLH conditions:
(APF = 10,000) Any self-contained breathing apparatus that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode
(APF = 10,000) Any supplied-air respirator that has a full facepiece and is operated in a pressure-demand or other

(APF = 10,000) Any supplied-air respirator that has a full facepiece and is operated in a pressure demand or other positive-pressure mode in combination with an auxiliary self-contained positive-pressure breathing apparatus

Escape:

(APF = 50) Any air-purifying, full-facepiece respirator with an N100, R100, or P100 filter.
Click here for information on selection of N, R, or P filters.

Any appropriate escape-type, self-contained breathing apparatus

Important additional information about respirator selection

See also

INTRODUCTION ICSC CARD: 0208 MEDICAL TESTS: 0246

Page last reviewed: October 30, 2019

Centers for Disease Control and Prevention

The National Institute for Occupational Safety and Health (NIOSH)

Promoting productive workplaces through safety and health research

Synonyms & Trade Names

Aroclor® 1242, PCB [Chlorodiphenyl (42% chlorine)], Polychlorinated biphenyl [Chlorodiphenyl (42% chlorine)]

CAS No.

53469-21-9

RTECS No.

TQ1356000

DOT ID & Guide

2315 171

Formula

$C_6H_4ClC_6H_3Cl_2$ (approx)

Conversion

IDLH

Ca [5 mg/m^3]
See: 53469219

Exposure Limits

NIOSH REL
Ca TWA 0.001 mg/m^3 See Appendix A [*Note: The REL also applies to other PCBs.]
OSHA PEL
TWA 1 mg/m^3 [skin]

Measurement Methods

NIOSH 5503;
OSHA PV2089
See: NMAM or OSHA Methods

Physical Description

Colorless to light-colored, viscous liquid with a mild, hydrocarbon odor.

Molecular Weight	Boiling Point	Freezing Point	Solubility	Vapor Pressure	Ionization Potential
258 (approx)	617-691°F	-2°F	Insoluble	0.001 mmHg	?

Specific Gravity	Flash Point	Upper Explosive Limit	Lower Explosive Limit		
(77°F): 1.39	NA	NA	NA		

Nonflammable Liquid, but exposure in a fire results in the formation of a black soot containing PCBs, polychlorinated dibenzofurans & chlorinated dibenzo-p-dioxins.

Incompatibilities & Reactivities

Strong oxidizers

Exposure Routes

inhalation, skin absorption, ingestion, skin and/or eye contact

Symptoms

irritation eyes; chloracne; liver damage; reproductive effects; [potential occupational carcinogen]

Target Organs

Skin, eyes, liver, reproductive system

Cancer Site

[in animals: tumors of the pituitary gland & liver, leukemia]

Personal Protection/Sanitation

(See protection codes)
Skin: Prevent skin contact
Eyes: Prevent eye contact
Wash skin: When contaminated
Remove: When wet or contaminated
Change: Daily
Provide: Eyewash, Quick drench

First Aid

(See procedures)
Eye: Irrigate immediately
Skin: Soap wash immediately
Breathing: Respiratory support
Swallow: Medical attention immediately

Respirator Recommendations

NIOSH

At concentrations above the NIOSH REL, or where there is no REL, at any detectable concentration:
(APF = 10,000) Any self-contained breathing apparatus that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode
(APF = 10,000) Any supplied-air respirator that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary self-contained positive-pressure breathing apparatus

Escape:
(APF = 50) Any air-purifying, full-facepiece respirator (gas mask) with a chin-style, front- or back-mounted organic vapor canister having an N100, R100, or P100 filter.
Click here for information on selection of N, R, or P filters.
Any appropriate escape-type, self-contained breathing apparatus

Important additional information about respirator selection

See also

INTRODUCTION MEDICAL TESTS: 0175

Page last reviewed: October 30, 2019

Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), 29CFR1910/1200 and GHS Rev. 3

Effective date: 05/17/2017 **Revision** : 05/17/2017

Trade Name: Liquinox

1 Identification of the substance/mixture and of the supplier

1.1 Product identifier

Trade Name: Liquinox
Synonyms:
Product number: 1232-1, 1232, 1201-1, 1201, 1205, 1215, 1255

1.2 Application of the substance / the mixture : Cleaning material/Detergent

1.3 Details of the supplier of the Safety Data Sheet

Manufacturer **Supplier**
Alconox, Inc.
30 Glenn Street
White Plains, NY 10603
1-914-948-4040

Emergency telephone number:
ChemTel Inc
North America: 1-800-255-3924
International: 01-813-248-0585

2 Hazards identification

2.1 Classification of the substance or mixture:

In compliance with EC regulation No. 1272/2008, 29CFR1910/1200 and GHS Rev. 3 and amendments.

Hazard-determining components of labeling:
Alcohol ethoxylate
Sodium alkylbenzene sulfonate
Sodium xylenesulphonate
Lauramine oxide

2.2 Label elements:

Eye irritation, category 2A.
Skin irritation, category 2.

Hazard pictograms:

Signal word: Warning

Hazard statements:
H315 Causes skin irritation.
H319 Causes serious eye irritation.

Precautionary statements:
P264 Wash skin thoroughly after handling.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P302+P352 If on skin: Wash with soap and water.
P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
P332+P313 If skin irritation occurs: Get medical advice/attention.
P501 Dispose of contents and container as instructed in Section 13.

Additional information: None.

Hazard description

Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), 29CFR1910/1200 and GHS Rev. 3

Effective date: 05/17/2017 **Revision** : 05/17/2017

Trade Name: Liquinox

Hazards Not Otherwise Classified (HNOC): None

Information concerning particular hazards for humans and environment:

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

Classification system:

The classification is according to EC regulation No. 1272/2008, 29CFR1910/1200 and GHS Rev. 3 and amendments, and extended by company and literature data. The classification is in accordance with the latest editions of international substances lists, and is supplemented by information from technical literature and by information provided by the company.

3 Composition/information on ingredients

3.1 Chemical characterization : None

3.2 Description : None

3.3 Hazardous components (percentages by weight)

Identification	Chemical Name	Classification	Wt. %
CAS number: 68081-81-2	Sodium Alkylbenzene Sulfonate	Acute Tox. 4; H303 Skin Irrit. 2 ; H315 Eye Irrit. 2; H319	10-25
CAS number: 1300-72-7	Sodium Xylenesulphonate	Eye Irrit. 2; H319	2.5-10
CAS number: 84133-50-6	Alcohol Ethoxylate	Skin Irrit. 2 ; H315 Eye Dam. 1; H318	2.5-10
CAS number: 1643-20-5	Lauramine oxide	Skin Irrit. 2 ; H315 Eye Dam. 1; H318	1-2

3.4 Additional Information: None.

4 First aid measures

4.1 Description of first aid measures

General information: None.

After inhalation:

Maintain an unobstructed airway.

Loosen clothing as necessary and position individual in a comfortable position.

After skin contact:

Wash affected area with soap and water.

Seek medical attention if symptoms develop or persist.

After eye contact:

Rinse/flush exposed eye(s) gently using water for 15-20 minutes.

Remove contact lens(es) if able to do so during rinsing.

Seek medical attention if irritation persists or if concerned.

After swallowing:

Rinse mouth thoroughly.

Seek medical attention if irritation, discomfort, or vomiting persists.

4.2 Most important symptoms and effects, both acute and delayed

None

Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), 29CFR1910/1200 and GHS Rev. 3

Effective date: 05/17/2017 **Revision** : 05/17/2017

Trade Name: Liquinox

4.3 Indication of any immediate medical attention and special treatment needed:

No additional information.

5 Firefighting measures

5.1 Extinguishing media

Suitable extinguishing agents:

Use appropriate fire suppression agents for adjacent combustible materials or sources of ignition.

For safety reasons unsuitable extinguishing agents : None

5.2 Special hazards arising from the substance or mixture :

Thermal decomposition can lead to release of irritating gases and vapors.

5.3 Advice for firefighters

Protective equipment:

Wear protective eye wear, gloves and clothing.
Refer to Section 8.

5.4 Additional information :

Avoid inhaling gases, fumes, dust, mist, vapor and aerosols.
Avoid contact with skin, eyes and clothing.

6 Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures :

Ensure adequate ventilation.
Ensure air handling systems are operational.

6.2 Environmental precautions :

Should not be released into the environment.
Prevent from reaching drains, sewer or waterway.

6.3 Methods and material for containment and cleaning up :

Wear protective eye wear, gloves and clothing.

6.4 Reference to other sections : None

7 Handling and storage

7.1 Precautions for safe handling :

Avoid breathing mist or vapor.
Do not eat, drink, smoke or use personal products when handling chemical substances.
Conditions for safe storage, including any incompatibilities:
Store closed upright and in a cool dry place, should be 15 - 30 deg C or 60 - 90 deg F.

7.2 Specific end use(s):

No additional information.

Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), 29CFR1910/1200 and GHS Rev. 3

Effective date: 05/17/2017 **Revision** : 05/17/2017

Trade Name: Liquinox

8 Exposure controls/personal protection

8.1 Control parameters :

No applicable occupational exposure limits

8.2 Exposure controls

Appropriate engineering controls:

Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use or handling.

Respiratory protection:

Not needed under normal conditions.

Protection of skin:

Select glove material impermeable and resistant to the substance.

Eye protection:

Safety goggles or glasses, or appropriate eye protection.

General hygienic measures:

Wash hands before breaks and at the end of work.
Avoid contact with skin, eyes and clothing.

9 Physical and chemical properties

Appearance (physical state, color):	Pale yellow liquid	**Explosion limit lower:** **Explosion limit upper:**	Not determined or not available. Not determined or not available.
Odor:	Not determined or not available.	**Vapor pressure at 20°C:**	Not determined or not available.
Odor threshold:	Not determined or not available.	**Vapor density:**	Not determined or not available.
pH-value:	8.5 as is	**Relative density:**	Not determined or not available.
Melting/Freezing point:	Not determined or not available.	**Solubilities:**	Not determined or not available.
Boiling point/Boiling range:	Not determined or not available.	**Partition coefficient (n-octanol/water):**	Not determined or not available.
Flash point (closed cup):	Not determined or not available.	**Auto/Self-ignition temperature:**	Not determined or not available.
Evaporation rate:	Not determined or not available.	**Decomposition temperature:**	Not determined or not available.
Flammability (solid, gaseous):	Not determined or not available.	**Viscosity:**	a. Kinematic: Not determined or not available. b. Dynamic: Not determined or not available.

Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), 29CFR1910/1200 and GHS Rev. 3

Effective date: 05/17/2017 **Revision** : 05/17/2017

Trade Name: Liquinox	
Density at 20°C:	Not determined or not available.

10 Stability and reactivity

10.1 Reactivity : None

10.2 Chemical stability : None

10.3 Possibility hazardous reactions : None

10.4 Conditions to avoid : None

10.5 Incompatible materials : None

10.6 Hazardous decomposition products : None

11 Toxicological information

11.1 Information on toxicological effects :

Acute Toxicity:

Oral:

: LD50 >5000 mg per kg Rat, Oral) - product .

Chronic Toxicity: No additional information.

Skin corrosion/irritation:

Alcohol Ethoxylate: May cause mild to moderate skin irritation.

Sodium Alkylbenzene Sulfonate: Causes skin irritation.

Lauramine oxide: Causes skin irritation.

Serious eye damage/irritation:

Sodium Alkylbenzene Sulfonate: Causes serious eye irritation.

Alcohol Ethoxylate: Causes moderate to severe eye irritation and conjunctivitis.

Sodium xylenesulphonate: Rabbit: irritating to eyes.

Lauramine oxide: Causes serious eye damage.

Respiratory or skin sensitization: No additional information.

Carcinogenicity: No additional information.

IARC (International Agency for Research on Cancer): None of the ingredients are listed.

NTP (National Toxicology Program): None of the ingredients are listed.

Germ cell mutagenicity: No additional information.

Reproductive toxicity: No additional information.

STOT-single and repeated exposure: No additional information.

Additional toxicological information: No additional information.

12 Ecological information

12.1 Toxicity:

Sodium Alkylbenzene Sulfonate: Fish, LC50 1.67 mg/l, 96 hours.

Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), 29CFR1910/1200 and GHS Rev. 3

Effective date: 05/17/2017 **Revision** : 05/17/2017

Trade Name: Liquinox

Sodium Alkylbenzene Sulfonate: Aquatic invertebrates, EC50 Daphnia 2.4 mg/l, 48 hours.
Sodium Alkylbenzene Sulfonate: Aquatic Plants, EC50 Algae 29 mg/l, 96 hours.
Lauramine oxide: Fish, LC0 24.3 mg/l, 96h [Killifish (Cyprinodontidae)]
Lauramine oxide: Aquatic invertebrates, (LC50): 3.6 mg/l 96 hours [Daphnia (Daphnia)].
Lauramine oxide: Aquatic plants, EC50 Algae 0.31 mg/l 72 hours [Algae]
Alcohol Ethoxylate: Aquatic invertebrates, (LC50): 4.01 mg/l 48 hours [Daphnia (daphnia)].

12.2 Persistence and degradability: No additional information.

12.3 Bioaccumulative potential: No additional information.

12.4 Mobility in soil: No additional information.

General notes: No additional information.

12.5 Results of PBT and vPvB assessment:

PBT: No additional information.

vPvB: No additional information.

12.6 Other adverse effects: No additional information.

13 Disposal considerations

13.1 Waste treatment methods (consult local, regional and national authorities for proper disposal)

Relevant Information:

It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities. (US 40CFR262.11).

14 Transport information

14.1 UN Number: ADR, ADN, DOT, IMDG, IATA	None
14.2 UN Proper shipping name: ADR, ADN, DOT, IMDG, IATA	None
14.3 Transport hazard classes: ADR, ADN, DOT, IMDG, IATA	**Class:** None **Label:** None **LTD. QTY:** None

US DOT

Limited Quantity Exception: None

Bulk:
RQ (if applicable): None
Proper shipping Name: None
Hazard Class: None
Packing Group: None
Marine Pollutant (if applicable): No additional information.
Comments: None

Non Bulk:
RQ (if applicable): None
Proper shipping Name: None
Hazard Class: None
Packing Group: None
Marine Pollutant (if applicable): No additional information.
Comments: None

Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), 29CFR1910/1200 and GHS Rev. 3

Effective date: 05/17/2017 **Revision** : 05/17/2017

Trade Name: Liquinox

14.4 Packing group: ADR, ADN, DOT, IMDG, IATA	None
14.5 Environmental hazards :	None
14.6 Special precautions for user:	None
Danger code (Kemler):	None
EMS number:	None
Segregation groups:	None

14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code: Not applicable.

14.8 Transport/Additional information:

Transport category:	None
Tunnel restriction code:	None
UN "Model Regulation":	None

15 Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture.

North American

SARA

Section 313 (specific toxic chemical listings): None of the ingredients are listed.
Section 302 (extremely hazardous substances): None of the ingredients are listed.

CERCLA (Comprehensive Environmental Response, Clean up and Liability Act) Reportable

Spill Quantity: None of the ingredients are listed.

TSCA (Toxic Substances Control Act):

Inventory: All ingredients are listed.
Rules and Orders: Not applicable.

Proposition 65 (California):

Chemicals known to cause cancer: None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for females: None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for males: None of the ingredients are listed.

Chemicals known to cause developmental toxicity: None of the ingredients are listed.

Canadian

Canadian Domestic Substances List (DSL):
All ingredients are listed.

EU

REACH Article 57 (SVHC): None of the ingredients are listed.

Germany MAK: Not classified.

Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), 29CFR1910/1200 and GHS Rev. 3

Effective date: 05/17/2017 **Revision** : 05/17/2017

Trade Name: Liquinox

Asia Pacific

Australia

Australian Inventory of Chemical Substances (AICS): All ingredients are listed.

China

Inventory of Existing Chemical Substances in China (IECSC): All ingredients are listed.

Japan

Inventory of Existing and New Chemical Substances (ENCS): All ingredients are listed.

Korea

Existing Chemicals List (ECL): All ingredients are listed.

New Zealand

New Zealand Inventory of Chemicals (NZOIC): All ingredients are listed.

Philippines

Philippine Inventory of Chemicals and Chemical Substances (PICCS): All ingredients are listed.

Taiwan

Taiwan Chemical Substance Inventory (TSCI): All ingredients are listed.

16 Other information

Abbreviations and Acronyms: None

Summary of Phrases

Hazard statements:

H315 Causes skin irritation.
H319 Causes serious eye irritation.

Precautionary statements:

P264 Wash skin thoroughly after handling.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P302+P352 If on skin: Wash with soap and water.
P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
P332+P313 If skin irritation occurs: Get medical advice/attention.
P501 Dispose of contents and container as instructed in Section 13.

Manufacturer Statement:

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

NFPA: 1-0-0

HMIS: 1-0-0

ATTACHMENT H
EMPLOYEE PROCEDURES HANDBOOK ADDENDUM:

GSI PANDEMIC DISEASE PLAN

Potential Hazards and Mitigation Measures

This GSI Environmental Inc. (GSI) Employee Procedures Handbook (EPH) Addendum (Addendum) outlines the potential hazards and safety measures related to pandemics, in particular the Coronavirus Disease 2019 (COVID-19), that all GSI employees should understand and implement when completing work-related activities and as general precautions for all staff during pandemic outbreaks. This Addendum also outlines additional health and safety precautions as a supplement to the general health and safety procedures outlined in the GSI Environment, Health, and Safety (EHS) Program Manual and Procedures Handbook. This Addendum is written to guide GSI employees in implementing essential work-related tasks, such as field operations, in accordance with Occupational Safety and Health Administration (OSHA) *Guidance on Preparing Workplaces for COVID-19* (OSHA COVID-19 Guidance).[1]

1.0 SCOPE OF THIS ADDENDUM

Many cities, counties, and states may implement 'stay-at-home' orders during a pandemic outbreak, such as during the COVID-19 outbreak.[2,3,4] In addition, certain orders (such as the State of California and Harris County, Texas) under the guidance of the Department of Homeland Security may deem certain job sectors' infrastructure workers as essential, including environmental remediation and monitoring under the energy sector and environmental protection and remediation under the water and wastewater sector.[5,6,7,8] Many GSI projects fall under these or other essential job sectors required to continue business operations during the COVID-19 outbreak. Several regulatory agencies have indicated that their oversight, including field work, are essential activities for protection of human health and the environment and will continue under COVID-19 protocols.[8,9]

It is important to be aware of, and implement, best practices for personal protection to mitigate potential transmission of diseases during a pandemic. This Addendum specifically describes potential health hazards and mitigation measures associated with COVID-19, in accordance with the guidance of the OSHA *Guidance on Preparing Workplaces for COVID-19*.[10] Safe practices for the reopening of GSI offices are discussed under separate cover and included as Attachment 1 to this Addendum (*GSI Plan for Return to Office Memorandum*).[11] However, the mitigation measures described herein should be practiced during any future pandemic outbreaks. It is important to note that the information on diseases during a pandemic outbreak, such as COVID-19, is evolving and procedures described in this Addendum may be updated based on the best available information at that time.

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[1] https://www.osha.gov/Publications/OSHA3990.pdf
[2] https://covid19.ca.gov/img/Executive-Order-N-33-20.pdf
[3] fhttps://www.readyharris.org/Stay-Home
[4] http://www.austintexas.gov/edims/document.cfm?id=337824
[5] https://www.cisa.gov/sites/default/files/publications/CISA-Guidance-on-Essential-Critical-Infrastructure-Workers-1-20-508c.pdf
[6] https://www.cisa.gov/sites/default/files/publications/CISA_Guidance_on_the_Essential_Critical_Infrastructure_Workforce_Version_2.0_Updated.pdf
[7] https://covid19.ca.gov/img/EssentialCriticalInfrastructureWorkers.pdf
[8] https://www.waterboards.ca.gov/resources/covid-19_updates/
[9] LinkedIn notification by Brownfield Development Manager, Cypress Division, Cal-EPA DTSC, 24 March 2020.
[10] See note 1.
[11] GSI Environmental Inc. (GSI), 2021. GSI Plan for Return to Office Memorandum. 4 January 2021.

2.0 WHAT IS COVID-19

COVID-19 is a respiratory disease caused by the novel SARS-CoV-2 virus; a strain of coronavirus discovered in 2019. Coronaviruses (CoV) are a large family of viruses that cause illness ranging from the common cold to more severe diseases such as Middle East Respiratory Syndrome (MERS-CoV) and Severe Acute Respiratory Syndrome (SARS-CoV).[12]

Coronaviruses are transmitted between animals and humans (i.e., zoonotic) and affect the respiratory system in humans. Common signs of infection include respiratory symptoms, fever, cough, shortness of breath and breathing difficulties. In more severe cases, infection can cause pneumonia, severe acute respiratory syndrome, kidney failure and even death.

Infection with SARS-CoV-2, the virus that causes COVID-19, can cause illness ranging from mild to severe. In some cases, infection can be fatal. As listed above, symptoms typically include fever, cough, and shortness of breath. Some people infected with the virus have reported experiencing other non-respiratory symptoms. Other people, referred to as asymptomatic cases, have experienced no symptoms at all.[13] According to the Centers for Disease Control and Prevention (CDC), symptoms of COVID-19 may appear in as few as 2 days or as long as 14 days after exposure.[14]

3.0 COVID-19 SYMPTOMS AND TRANSMISSION

The COVID-19 virus affects people in different ways. COVID-19 is a respiratory disease and most infected people will develop mild to moderate symptoms and recover without requiring special treatment. People who have underlying medical conditions and those over 60 years old have a higher risk of developing severe symptoms and potentially death.

Common symptoms include:

- fever
- tiredness
- dry cough
- loss of the sense of taste or smell

Other symptoms may include:

- shortness of breath
- aches and pains
- sore throat
- and very few people will report diarrhea, nausea or a runny nose[15]

Symptoms generally appear within 2 to 14 days. COVID-19 is mainly spread from person-to-person through the following pathways:

- Between people in close contact (within about 6 feet); and

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[12] https://www.who.int/health-topics/coronavirus
[13] See note 1.
[14] https://www.cdc.gov/coronavirus/2019-ncov/symptoms-testing/symptoms.html
[15] https://www.who.int/health-topics/coronavirus#tab=tab_3

- Through respiratory droplets produced when an infected person coughs or sneezes. These droplets can land in the mouths or noses, or possibly inhaled into the lungs of people in close proximity.[16]

COVID-19 may also be transmitted by touching a surface or object that has the virus on it followed by touching one's own mouth, nose, or eyes. However, this is not thought to be the primary way the virus spreads. People are most contagious when they are most symptomatic (i.e., experiencing fever, cough, and/or shortness of breath). Some spread might be possible before people show symptoms; there have been reports of this type of asymptomatic transmission with this new coronavirus, but this is also not thought to be the main way the virus spreads. Although the United States has implemented public health measures to limit the spread of the virus, it is likely that some person-to-person transmission will continue to occur. The CDC website provides the latest information about COVID-19 transmission: www.cdc.gov/coronavirus/2019-ncov/about/transmission.html.

4.0 PREVENTION AND MITIGATION MEASURES

During pandemic outbreaks, all GSI employees who would like to work from home regardless of their position may be given the opportunity to do so. Consideration of individual family circumstances and protective health measures must be made by each employee. It is GSI's current policy that all employees follow CDC guidelines and other state and/or county orders related to pandemic outbreaks, such as the COVID-19 pandemic, including guidelines discussed in the OSHA COVID-19 Guidance and the California Division of Occupational Safety and Health (Cal/OSHA) guidance.[17,18] Furthermore, GSI encourages employees to consult with their primary care physician and consider immunization guidelines of the CDC and/or local health departments to obtain appropriate immunizations when vaccines become available. [19] Additional guidelines for mitigation measures while working in the GSI offices, including procedures for disinfecting surfaces and safety measures while completing work at the offices, are described in the *GSI Plan for Return to Work Memorandum* and included as Attachment 1 to this Addendum.

GSI will continue to provide its services as a member of the Essential Critical Infrastructure Workforce, which may include some GSI employees performing fieldwork during a pandemic outbreak. Therefore, certain additional health and safety measures to prevent the transmission and spread of diseases, as described herein, should be followed.

Engineering Controls

Below is a description of potential engineering controls that should be implemented as appropriate.

Utilize Plastic on Surfaces and/or Disinfect Surfaces

Put plastic sheeting on surfaces where field staff will be eating or drinking and change plastic out as necessary to prevent the spread of the disease. If plastic is not available, clean and disinfect surfaces prior to and after use.

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[16] https://www.cdc.gov/coronavirus/2019-ncov/prepare/transmission.html?CDC_AA_refVal=https%3A%2F%2Fwww.cdc.gov%2Fcoronavirus%2F2019-ncov%2Fabout%2Ftransmission.html
[17] https://www.dir.ca.gov/dosh/coronavirus/General-Industry.html
[18] https://www.osha.gov/Publications/OSHA3990.pdf
[19] https://www.cdc.gov/coronavirus/2019-ncov/vaccines/recommendations.html

Additionally, all frequently touched surfaces such as tables, car doors, light switches, countertops, handles, phones, keyboards, toilets, faucets, and sinks should be disinfected at least daily, preferably several times a day. If surfaces are dirty, clean them by using detergent or soap and water prior to disinfection.

Disinfectants that can be used include a bleach solution (1/3 cup to 1 gallon of water) or the other disinfectants suggested by the United States Environmental Protection Agency (USEPA) in List N: Disinfectants for Use Against SARS-CoV-2 (https://www.epa.gov/pesticide-registration/list-n-disinfectants-use-against-sars-cov-2).

Increase Ventilation

Increase ventilation where applicable by completing work outside instead of inside.

Administrative Controls

Below is a description of administrative controls that should be implemented as appropriate.

Stay at Home if You Are Sick

First and foremost, if you are sick, stay home. Do not perform fieldwork if you are sick. If you wake up sick prior to fieldwork, inform the Project Team Leader (PTL) who will subsequently schedule another staff member or reschedule the work. During the pandemic outbreak, it is GSI's policy to remain at home and follow CDC-recommended social isolation and/or self-quarantine protocols if you are sick or think that you may have contracted the disease.

Avoid Sharing Personal Items

In general, it is never a good idea to share personal items, but particularly not during a pandemic outbreak. It is important that you do not share coffee cups, water bottles, or any other personal items. Label your disposable water bottles with your initials to prevent others from mistaking your water bottles for their own.

Maintain a Safe Distance from Others (6-foot Rule)

As a general safety practice during a pandemic outbreak and to the extent practical, try to maintain a safe distance (i.e., 6 feet) from other field personnel and subcontractors while performing fieldwork. Do not shake hands, hug, or perform any other greeting with physical contact. Other ideas for greetings are waves or verbal greetings.

Wash Your Hands

Wash your hands often with soap and warm water for at least 20 seconds, especially after you have been in a public place, or after blowing your nose, coughing, or sneezing. If soap and water are not readily available, use company-supplied hand sanitizer that contains at least 60% alcohol. Cover all surfaces of your hands and rub them together until they feel dry. Avoid touching your eyes, nose, and mouth with unwashed hands. Use chemical-resistant gloves whenever possible.

Cover Coughs and Sneezes

Cover your mouth and nose with a tissue when you cough or sneeze or use the inside of your elbow. Throw any used tissues in the trash and immediately wash your hands with soap and water for at least 20 seconds. If soap and water are not readily available, clean your hands with a hand sanitizer that contains at least 60% alcohol.

Travel to and From Job Sites

Travel to and from job sites to implement essential field activities will follow local, state, and federal guidance and regulations. Decisions on travel (e.g., number of staff per vehicle and type of travel) will remain up to the project team and be discussed between field staff, PTL, and the principal in charge (PIC). Travel arrangements should be specified in the Site-Specific Health and Safety Plan (SS-HASP). Generally, to avoid other potential hazards (particularly on longer travel in vehicles), it may be acceptable to have more than one staff member in a vehicle at a time. However, social distancing procedures (such as rolling down windows and maintaining safe distances) should be implemented as possible.

Client- and/or site-specific travel requirements at host facilities at which GSI projects are being conducted may also apply. In some cases, these requirements may differ from GSI's standard policy. In such cases, the more protective standard will apply.

Personal Protective Equipment (PPE)

Below is a description of personal protective equipment (PPE) that may be used to help prevent the spread of diseases. All PPE should be inspected prior to using as specified in the GSI EHS Program Manual.

Face Coverings

The CDC and many counties and cities recommend and/or require the use of cloth face coverings or medical masks in public settings where other social distancing measures are difficult to maintain (e.g., grocery stores and pharmacies), especially in areas of significant community-based transmission.[20,21,22,23] In addition, some cities have issued orders requiring both employees and patrons to wear face coverings, such as scarves, bandanas, neck gaiters, or other fabric coverings or medical masks at essential businesses that provide retail goods, food, banking, and commercial services.[24] [25]

GSI personnel should carry clean cloth face coverings or medical masks when working outside of their home to ensure they are prepared to follow regional requirements for face coverings when visiting essential businesses, such as gas stations, grocery stores, or other retail, commercial, or public settings.

The use of cloth face coverings or medical masks compliments and does not replace other disease mitigation and prevention guidelines, such as for COVID-19.[26] It is important to follow other procedures described herein in conjunction with the use of face coverings, such as those described below including: washing your hands or using hand sanitizer and avoiding touching your eyes, nose, and mouth with unwashed hands.

The use of cloth face coverings or medical masks also does not replace or complement the use of respiratory protection personal PPE, as needed based on site-specific conditions, as described below.

The CDC has issued guidance and do-it-yourself instructions on making sewn and unsewn masks from cloth (such as T-shirt material), which are available on its website.[27]

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[20] https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/cloth-face-cover.html
[21] https://1ccaxf2hhhbh1jcwiktlicz7-wpengine.netdna-ssl.com/wp-content/uploads/2020/04/EOC-Press-Release-36-Masks.pdf
[22] https://occovid19.ochealthinfo.com/article/oc-health-officers-orders-recommendations
[23] https://www.cdph.ca.gov/Programs/OPA/Pages/NR20-128.aspx
[24] http://legacy.cityofirvine.org/civica/filebank/blobdload.asp?BlobID=32417
[25] Ibid
[26] https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/cloth-face-cover.html
[27] https://www.cdc.gov/coronavirus/2019-ncov/downloads/DIY-cloth-face-covering-instructions.pdf

Chemical-Resistant Gloves

Another strategy when handwashing and/or hand sanitizer is unavailable is to utilize clean chemical-resistant gloves when eating or drinking. In accordance with GSI EHS Program Manual and SS-HASP guidelines, disposable gloves are to be used on site when handling potentially impacted media. Therefore, chemical resistant gloves (e.g., latex or nitrile) or other disposable gloves should be readily available as PPE.

Respiratory Protection

GSI personnel are always allowed to utilize their GSI-issued respiratory PPE, even if not required for a specific job. As general practice, GSI work, including fieldwork, will not be performed in areas or with personnel of known infections. Therefore, respiratory protection such as air purifying respirators should not be required and/or provided unless other safety hazards require such PPE.

However, if deemed necessary, air purifying respirators with a particulate (purple) cartridge may be used to protect field personnel from airborne droplets. Cartridges must be disposed of after each use, and respirators must be disinfected after each use.

"Surgical" masks also are designed to provide minimum protection from nearby airborne droplets. However, they are not designed to pass a fit test as they do not form a tight fit and therefore should not be considered respiratory protection.

The use of respiratory protection must comply with state and federal regulations and GSI's Respiratory Protection Program, which includes fitness for use, proper training, fit testing, and use procedures.

Site-Specific Mitigation Measures

Specific job sites may require additional measures with regard to the pandemic outbreak. For example, practices such as temperature screening may be required for site entry. These site-specific measures should be detailed in the SS-HASP. Field staff that wish to opt out of site-specific screening will not be allowed on-site and should speak with the PTL prior to mobilization.

5.0 FIELD DOCUMENTS

The following additional documents should be kept with this Addendum, and supplemented as appropriate for project-specific work and for the pandemic outbreak at that time:

1. Executive Orders for the cities, counties, and/or states within which work is being conducted;
2. U.S. Department of Homeland Security, Advisory Memorandum on Identification of Essential Critical Infrastructure Workers During COVID-19 Response, 28 March 2020 (Version 2.0 Updated);
3. Copies of permits from county health care agencies or other permitting agencies;
4. Copies of orders or oversight agreements with regulatory agencies for the work being conducted (e.g., PFAS chrome plating or airport orders, oversight agreements with state and county agencies for environmental actions);[28]
5. Work Plans outlining the work being performed that reference regulatory directives and their associated agency approval letter, as applicable; and
6. GSI business cards.

[28] Also include copies of applicable notifications or regulatory updates such as the California State Water Resources Control Board, Compliance with Water Board Requirements During the Coronavirus 2019 (COVID-19) Emergency, March 20, 2020 (https://www.waterboards.ca.gov/resources/covid-19_updates/).

GSI personnel performing field activities should discuss talking points with the project PTL and PIC and identify key documents, such as those outlined above, to have available to demonstrate compliance with government orders and any prevention and mitigation measures recommended by CDC.

6.0 COMMUNICATION

All communications regarding amendments to the GSI Pandemic Disease Plan will be transmitted via email by GSI's Human Resource Manager (HRM), Rebecca Grant. The company HRM will maintain up-to-date lists of all key contacts, including phone numbers and email addresses for all GSI personnel (see GSI "Phone List"). In the event of an outbreak that impacts GSI's ability to perform its services, the HRM will facilitate external/customer communications, including notification when operations may resume.

All employee pandemic-related concerns and issues must be communicated directly to the company HRM. In addition, all employees must log in on their respective office-specific Outlook Calendars when visiting the office for any purpose or for any amount of time.

7.0 SUMMARY

This Addendum describes the potential hazards and safety measures related to infectious diseases during pandemic outbreaks that all GSI employees should understand and implement when working. The information described within this Addendum is meant to be used as guidelines to help GSI personnel implement office and field work safely and under federal and state regulations. As a company implementing essential services, GSI and its staff continue to hold safety paramount to any field activities. Additionally, it is important to note that the information on any infectious disease during a pandemic will evolve and procedures described in this addendum may be updated based on the best available information at that time.

The company HRM is responsible for creating, amending, and enforcing GSI's Pandemic Disease Plan. The company HRM will routinely review the GSI Pandemic Disease Plan and amend, as needed, to ensure compliance with local, state, and federal guidelines. Furthermore, following a pandemic event, the company HRM will identify "lessons learned" and implement any corrective actions, including, but not limited to, amending the GSI Pandemic Disease Plan. Any amendment to the GSI Pandemic Disease Plan will be immediately communicated to all employees via email by the company HRM.

Attachments

Attachment 1. GSI Plan for Return to Office Memorandum

GSI ENVIRONMENTAL

M E M O R A N D U M

TO: **Houston Staff**

FROM: **Management**

RE: **GSI Return to Work Plan-Updated**

We continue to be at ***High Risk*** for COVID infection and transmission. Please read the following guidelines for working in a GSI Office. Attached is GSI's Pandemic Disease Plan from our Employee Procedures Handbook and a checklist on minimum standard health protocols for office-based employees from the Texas Department of Health and Human Services.

As has been stated in prior email correspondence, working in the office remains entirely elective. GSI will provide masks, gloves, and hand sanitizer in all offices.

Those who choose to work in the office will need to strictly adhere to the following guidelines.

1. **Travel Restrictions:** Limit airplane travel to essential business. Upon return, please follow current CDC and state and local guidelines on the length of time to remain away from the office.
2. **Calendar Notice of Office Use:** Record your planned office visit (day and length of time) on the Outlook calendar for your office location, at least one day prior to your visit.
3. **Occupancy Limits:** For the time being, GSI will limit office occupancy based upon the 25% rule. Currently, both Texas and California are stating that "businesses located in office buildings may open but must limit their occupancy to the greater of 10 employees or 25% of their workforce." Based on the headcount of our offices, no more than 10 employees can be in these offices, at any given time. Priority will be given to those that have a particular need to be in the office that day.
4. **Self-Screen in Advance:** See check for symptoms on attached checklist. Check your temperature every day before coming to work. If you are exhibiting symptoms, do not come to the office.
5. **Entering the Building:** Wear masks in common areas of building, including lobbies, bathrooms and elevators. Do not use elevator with more than 4 people.
6. **Sanitize Upon Arrival at GSI:** Wash your hands as soon as you arrive at the office, using soap and water or sanitizing gel. Wipe down your work area before starting work. Cleaning and sanitizing supplies will be provided.
7. **Guests:** For the time being, we are not allowing guests in our offices. If an in-person client meeting is critical, prior approval from HR is required and guest(s) must complete a questionnaire and agree to follow the protocols we have in place for our offices.
8. **Safety During the Workday:**
   - Maintain 6 feet of separation from other co-workers
   - Wash hands frequently
   - Clean your work surface
   - Avoid shared workspaces (desks, offices, and cubicles) and work items (phones, computers, other work tools, and equipment) when possible.
   - If they must be shared, clean and disinfect shared workspaces and work items before and after use.
   - Wipe down commonly used equipment after use (copiers etc.).
   - Wear a mask in all common areas (elevators, restrooms, hallways, copy room, etc.)
   - Wear a mask if you share a cubicle wall with another employee who is also in the office.
   - **All** Conference Rooms and Kitchen: Limit occupancy to 1 person at a time and be sure to WIPE DOWN all areas that you have used.

GSI ENVIRONMENTAL

GSI Environmental Inc.
COVID-19 SCREENING QUESTIONNAIRE for Visitors

The safety of our employees and guests is our overriding priority. As the coronavirus (COVID-19) pandemic continues, we are monitoring the situation closely and following the guidance from the Centers for Disease Control and Prevention and local health authorities. In order to prevent the spread of the coronavirus and reduce the potential risk of exposure to our workforce, we are asking all visitors to GSI offices to complete and submit this questionnaire prior to entering the worksite. Please do not enter the worksite until your responses have been reviewed and your entry has been approved.

Please respond to each of the following questions truthfully and to the best of your ability. Your participation is important to help us take precautionary measures to protect you and our employees.

Name: _____ Company: _____

Title: _____ Cell: _____ Email: _____

Representations

1. **Are you currently experiencing, or have you experienced in the past 14 days, any of the following symptoms? (Please take your temperature before you answer this question.)**

   Yes ☐ No ☐ Fever (100.4° F/37.8° C or greater as measured by an oral thermometer)

   Yes ☐ No ☐ Cough

   Yes ☐ No ☐ Shortness of breath or difficulty breathing

   Yes ☐ No ☐ Sore throat

   Yes ☐ No ☐ New loss of taste or smell

   Yes ☐ No ☐ Chills

   Yes ☐ No ☐ Head or muscle aches

   Yes ☐ No ☐ Nausea, diarrhea, vomiting

2. **In the past 14 days, have you been in close proximity to anyone who was experiencing any of the above symptoms or has experienced any of the above symptoms since your contact?**

   Yes ☐ No ☐

GSI ENVIRONMENTAL

GSI Environmental Inc.
COVID-19 SCREENING QUESTIONNAIRE Visitors

3. **In the past 14 days, have you been in close proximity to anyone who has tested positive for COVID-19?**

   Yes ☐ No ☐

4. **Have you been tested for COVID-19 and are waiting to receive test results?**

   Yes ☐ No ☐

5. **Have you tested positive for COVID-19, or are you presumptively positive for COVID-19 based on your health care provider's assessment or your symptoms?**

   Yes ☐ No ☐

6. **In the past 14 days, have you been on a commercial flight or traveled outside of the United States?**

   Yes ☐ No ☐

7. **In the past 14 days, have you been in close proximity to anyone who has been on a commercial flight or traveled outside of the United States?**

   Yes ☐ No ☐

Certification

I hereby certify that the responses provided above are true and accurate to the best of my knowledge.

Signature: _____ Date: _____

Access to worksite: ☐ Approved ☐ Denied

OFF-SITE LFM INVESTIGATION WORK PLAN (AMENDED)
SA Recycling LLC
901 New Dock Street, Terminal Island, California

APPENDIX D

SA Recycling, Terminal Island Marine Sediment Investigation Work Plan

SA RECYCLING, TERMINAL ISLAND MARINE SEDIMENT INVESTIGATION WORK PLAN

Prepared for

SA Recycling, LLC
901 New Dock Street
Terminal Island, California

For submittal to

Department of Toxic Substances Control
1001 "I" Street
Sacramento, CA

April 22, 2022

Prepared by: Windward environmental LLC

200 First Avenue West, Suite 500 • Seattle, Washington • 98119

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Table of Contents

Table of Contents i

Figures i

Acronyms ii

1 Work Plan Objectives 1
- 1.1 WORK PLAN ORGANIZATION 5
- 1.2 PROJECT MANAGEMENT PLAN 5
  - 1.2.1 Reporting 6
  - 1.2.2 Schedule 6

2 Sampling Design Considerations 8
- 2.1 BACKGROUND 8
- 2.2 HYDRODYNAMICS 8
- 2.3 WIND 9
- 2.4 BIOAVAILABILITY 11
- 2.5 BATHYMETRY 12

3 Sampling Design and Rationale 13
- 3.1 MARINE SEDIMENT SAMPLING LOCATIONS 13
- 3.2 CHEMICAL ANALYSES 14

4 Data Evaluation 16

5 References 17

Figures

Figure 1-1. Illustration of SIWP marine sediment sampling plan 2

Figure 1-2. Proposed marine sediment sample areas: surface sediment and porewater sample locations 3

Figure 1-3. Windward project management organization 6

Figure 2-1. POLA/POLB windroses 10

Acronyms

ASR	auto shredder residue
ASTM	American Society for Testing and Materials
AVS-SEM	acid volatile sulfide-simultaneously extractable metal
COPC	contaminant of potential concern
CSM	conceptual site model
DER	data evaluation report
DOC	dissolved organic carbon
DTSC	Department of Toxic Substances Control
EPA	US Environmental Protection Agency
ERL	effects range-low
ERM	effects range-median
ESB	equilibrium partitioning sediment benchmark
FLPE	fluorinated high-density polyethylene
HDPE	high-density polyethylene
LFM	light fibrous material
NOAA	National Oceanic and Atmospheric Administration
PCB	polychlorinated biphenyl
POLA	Port of Los Angeles
POLB	Port of Long Beach
PSU	practical salinity unit
SAP	sampling and analysis plan
SATI	SA Recycling –Terminal Island
SIWP	sediment investigation work plan
SM	Standard Methods
STLC	soluble threshold limit concentration
TMDL	total maximum daily load
TOC	total organic carbon
TTLC	total threshold limit concentration

Windward	Windward Environmental LLC
WRAP	water resources action plan

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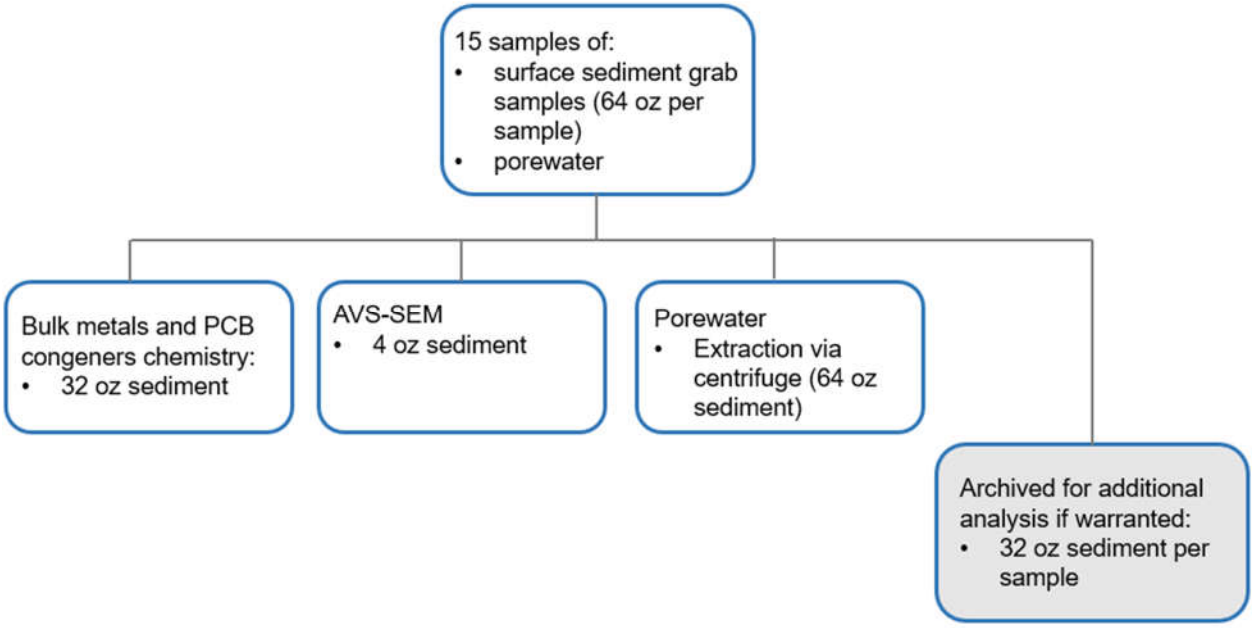
1 Work Plan Objectives

The purpose of this sediment investigation work plan (SIWP) for the SA Recycling LLC – Terminal Island (SATI) facility is to evaluate the potential contribution of light fibrous material (LFM) to concentrations of contaminants of potential concern (COPCs) in marine sediment at the facility site. Data generated through the SIWP will address the following questions associated with determining whether COPCs in sediment are primarily associated with LFM:

- Are there COPCs in the near-site marine sediments?
- For any metal COPCs, are these bioavailable?
- Are there any spatial patterns in the COPC concentrations?

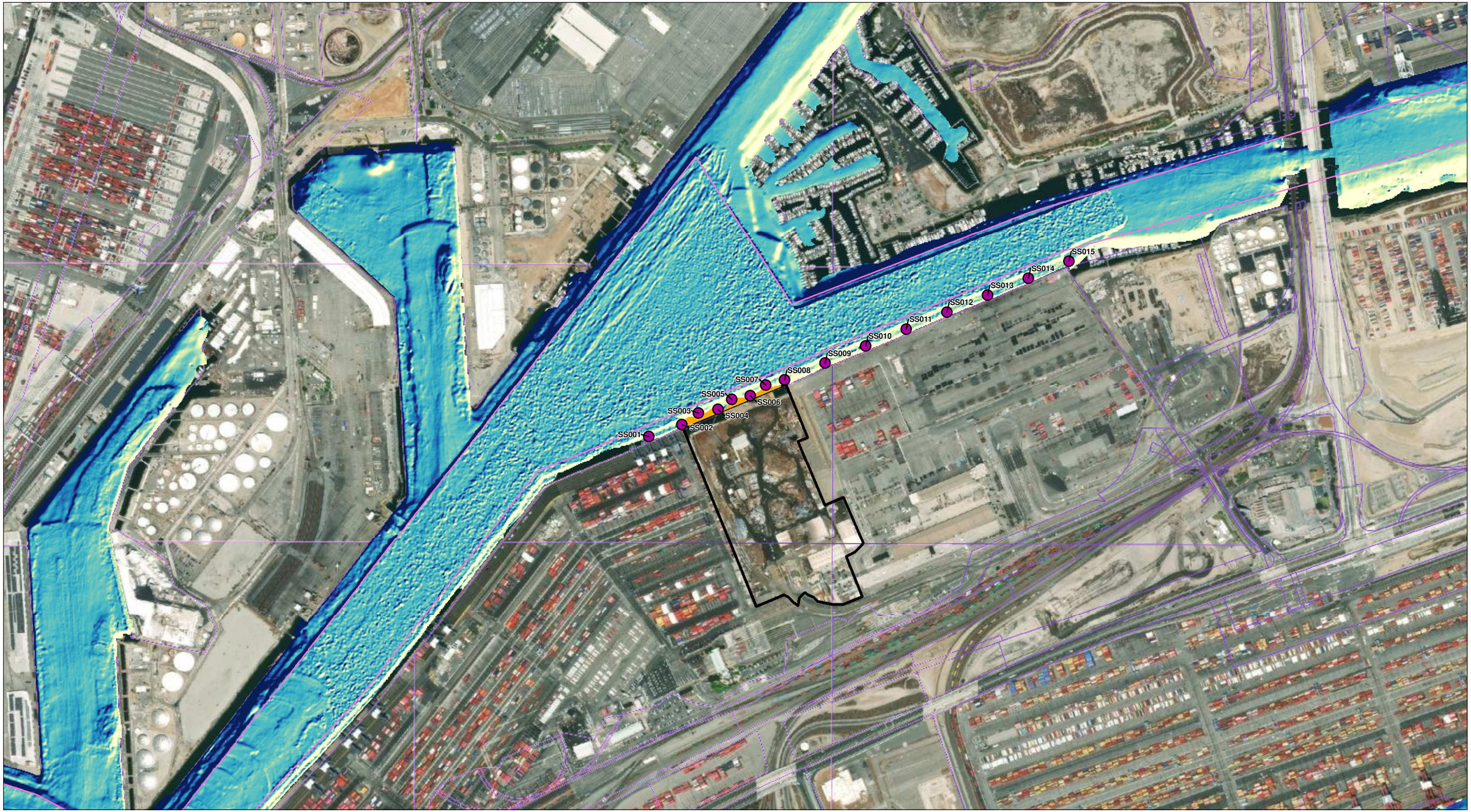
As elevated metals are often associated LFM, one primary focus of the study plan is to determine the concentrations of metals in the sediment and whether they pose ecological risk. Metal concentrations will be screened against ecological benchmarks. In addition, as metal toxicity is intrinsically linked to metal bioavailaibility in the sediment pore water, this study will also assess metal bioavailability in the final determination of COPCs. Additional COPCs will also be evaluated either as part of this study or archived for future evaluation pending additional results from on-wharf sediment study. The sampling and analysis approach described in this SIWP, will determine if COPCs are detectable in sediment at the proposed sampling locations which were selected as areas most likely to be impacted by LFM. Marine sediment sampling locations (Section 3) were identified by considering possible near-field transport mechanisms of LFM, along with the hydrodynamics of the aquatic area (Section 2). Sufficient sample volumes will be collected to support additional investigation as indicated as appropriate indicated by continued work to chemically characterize the LFM (see Section 4 of the Off-Site Investigation Plan).



Note: White boxes indicate actions that will occur under the SIWP; gray boxes indicate potential actions that may occur based on SIWP results.

Figure 1-1. Illustration of SIWP marine sediment sampling plan

Grab samples from surface sediment sampling locations, located near the SATI facility in the aquatic environment (Figure 1-2), will be analyzed for metals and PCB concentrations. Total metals and PCB concentrations will be screened against applicable benchmarks for potential benthic impacts (e.g., effect range-low [ERL] and effect range-medium [ERM]). The biological availability of metals will then be determined through acid volatile sulfide-simultaneously extractable metal (AVS-SEM) and porewater analyses.



Windward environmental LLC

N

0 0.1 0.2 Miles

0 0.1 0.2 Kilometers

Sample locations
Navigation channel
2016 Dredge footprint
SA Recycling
Parcels
Elevation (Meter - MLLW)
High : -1.43
Low : -19.61

Figure 1-2. Proposed marine sediment sample areas: surface sediment and porewater sample locations

Prepared by nicolase, 4/14/2022; W:\Projects\SA Recycling\GIS\Maps and Analyses\Sediment WP\Figure 1-2 7447d SA Recycling sediment workplan sampling design - current recommendation.mxd

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Details regarding the conceptual site model (CSM) for sediment, sample collection and handling protocols, and determination of metal bioavailability, and data analysis will be provided in a subsequent sampling and analysis plan(s) (SAP(s)), pending approval of this SIWP and availability of the on-wharf sediment study data (in progress, anticipated April 2022) to inform SAP(s) details.

1.1 WORK PLAN ORGANIZATION

In addition to this introduction, this SIWP contains the following sections:

- Section 2: Sampling Design Considerations –background concentrations of chemicals consistent with an active industrial port, and system hydrodynamics
- Section 3: Sampling Design and Rationale – describes sediment sampling plan and tiered approach to chemical and physical analysis of sediment samples
- Section 4: Data Evaluation – discusses initial reporting of the field study and anticipated evaluation of metal concentrations and bioavailability in sediments and porewater. Screening against ecological benchmarks will also be conducted for any additional chemical classes analyzed
- Section 5: References cited

1.2 PROJECT MANAGEMENT PLAN

SA Recycling will implement the SIWP along with a team of subject matter experts from Windward Environmental LLC (Windward) and GSI Environmental. Windward will assist with managing the sediment field study and provide support for data analysis and reporting efforts. The organizational chart for Windward is shown in Figure 1-3 (see Section 9.0 of the Investigation Plan for the GSI Environmental personnel):

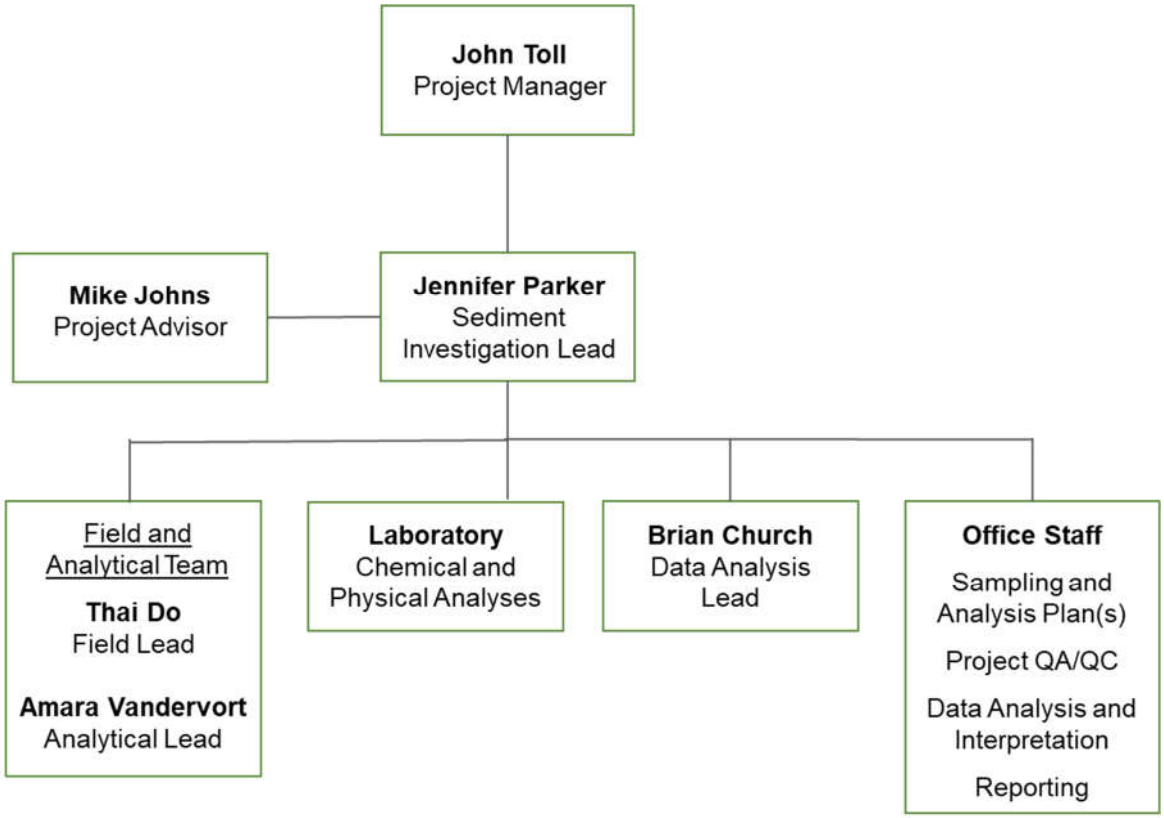


Figure 1-3.Windward project management organization

1.2.1 Reporting

A data evaluation report (DER) will be prepared following the chemical and visual analyses of the surface sediment samples. The DER will discuss the findings relative to the goals of the SIWP as stated in Section 4. As appropriate, an updated CSM will be provided (see Section 6.0 of the Off-Site LFM Investigation Work Plan). The DER will present conclusions regarding any contaminants of potential concern in the sediments, the bioavailability of metals present in the sediment and provide recommendations on additional sampling and/or analyses as warranted.

1.2.2 Schedule

Implementation of this SIWP and development of the subsequent SAP(s) will depend upon approval of the SIWP. An anticipated schedule is provided:

- SIWP
  - SIWP (April 22, 2022)
  - Approval of SIWP – To be determined

- SAP(s)
  - Submitted 60 days following approval of SIWP
- SIWP implementation
  - Initiated 30 days following approval of SAP(s)
- DER
  - Submitted 10 weeks following completion of laboratory analysis

2 Sampling Design Considerations

This section describes key considerations in the sampling design regarding the physical setting of the site such as bathymetry and hydrodynamics in the channel adjacent to the site.

2.1 BACKGROUND

Historical data from Port of Los Angeles (POLA) and Port of Long Beach (POLB) sediment are being compiled to support comparative analyses of the newly collected sediment samples proposed. Thus far, data have been compiled for sediments collected at the LA-2 reference area (associated with the offshore open-water dredge disposal site) and within POLA (Ramboll 2015; AMEC 2011, 2014) and POLB (Anchor QEA 2014), hereinafter referred to collectively as "port" data. LA-2 data represent a "clean" background condition, in that chemical concentrations in sediments disposed of at that site must meet certain screening criteria and are, therefore, deemed sufficiently clean and non-toxic. Contrarily, sediments collected within the port areas are affected by urban and industrial runoff and stormwater effluent, so the associated data represent an anthropogenic background condition. They may also contain high levels of contamination in some cases, so examination and removal of outliers may be warranted before comparisons to SATI data and LFM fingerprints.

LA-2 sediment data were used in multiple documents for comparison to sediments collected within POLA/POLB (Ramboll 2015; AMEC 2011, 2014; Anchor QEA 2014). Consistent chemical detections were reported for metals, including arsenic, cadmium, chromium, copper, lead, mercury, nickel, selenium, and zinc. LA-2 data were available from five samples collected by four different studies.

Port data were collected primarily in support of proposed construction and dredging projects. The background dataset currently includes 47 samples, 5 from POLA and 42 from POLB. Sediment concentrations reflect pre-dredge or pre-construction conditions influenced by on-wharf and upland urban and industrial activities, historical dredging of the navigation channel, and other ambient factors. Samples in the port dataset were collected as sediment cores (e.g., up to 12 ft depth below the mudline) that were then composited over small areas associated with distinct dredge areas. Since cores reflect concentrations over depth, there is some uncertainty regarding their use in comparative analysis with surface sediment near the SATI facility. Background data will continue to be compiled from available sources.

2.2 HYDRODYNAMICS

The water resources action plan (WRAP) hydrodynamic model, developed for POLA/POLB, was developed in support of the total maximum daily load (TMDL) regional studies (Everest 2009, 2017). The model is a 3-dimensional, hydrodynamic, sediment transport and chemical fate model of Dominguez Channel, Los

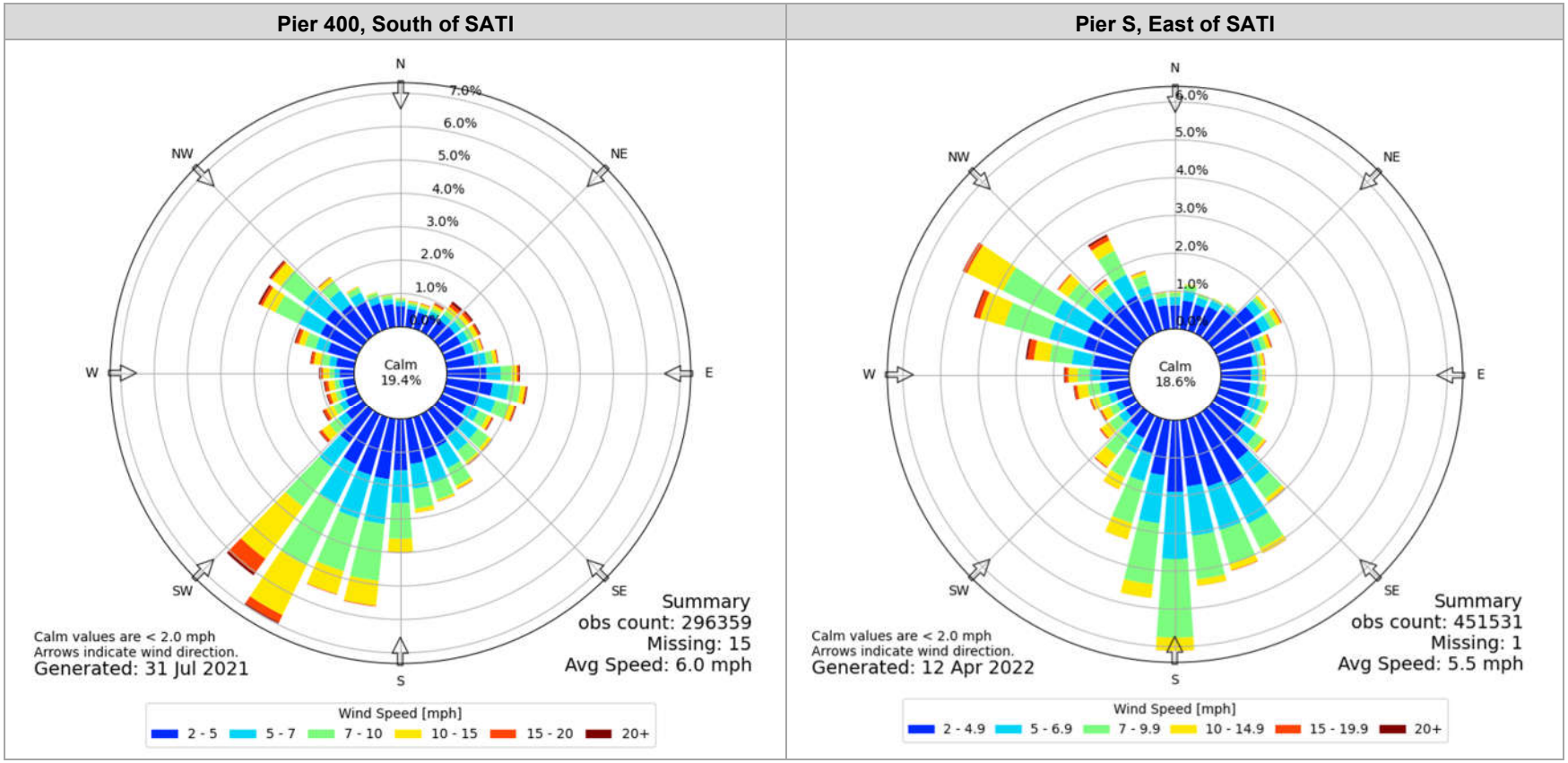
Angeles/Long Beach Harbor, and San Pedro Bay. The SATI facility lies in the downstream reach of Dominguez Channel, which is influenced by tidal exchange from POLA.

Dominguez Channel is fully influenced by tides, and flow reversals have been consistent in all seasons. The SATI facility lies within the maximum ebb and flood current patterns. During the flood tide (i.e., tide coming in and shown as positive velocities), flow continues up Dominguez Channel north past the facility. At the same time, in Cerritos Channel, eastward flood tide from San Pedro Bay reaches Berth 206 and joins Dominguez Channel flood tide in the vicinity of the SATI facility. During the ebb tide (i.e., tide retreating), flow direction in Dominguez Channel reverses, and flow splits between the main channel (going southwest) and Cerritos Channel (going west to east and continuing around Terminal Island). Tide observations at Berth 206 indicate that ebb tides are more frequent than flood tides, and that the ebb tide pattern is dominant. At Berth 173 (south of the site), the flood and ebb tides occur at about the same frequency.

The Dominguez Channel profile at the facility site is characterized by fresh water near the surface (thus decreasing the overall salinity to ~6 practical salinity unit [PSU]) and saltwater (associated with tidal exchange) near the channel bottom (~33 PSU).

2.3 WIND

Wind patterns in the POLA/POLB area are tracked at several stations that report data to the Iowa Environmental Mesonet (Iowa State University 2022). The most representative stations for the wind patterns at the SATI facility are at Pier 400 (33.73520, -118.24130) south of SATI and Pier S (33.7683, -118.2257) east of SATI. Figure 2-19 shows the windroses for these locations; windroses show the percentages of data represented by varying wind strengths and the directions from which the winds arrive at the station. Figure 2-19 shows that predominant winds are from the southwest to the northeast, but that there is also a secondary pattern from the northwest to southeast, particularly at Pier S.



Source: Iowa State University (2022)

Note: Wind data available from September 2016 to July 2021 for Pier 400 and August and September 2016 to April 2022 for Pier S.

Figure 2-1.POLA/POLB windroses

2.4 BIOAVAILABILITY

Based on total metals data, metal concentrations appear to be elevated in certain on-wharf sediment samples collected in the vicinity of the SATI facility. In particular, total concentrations of lead and zinc exceed total threshold limit concentration (TTLC) values. However, total concentrations of metals provide poor estimates of toxicity risk to benthic organisms in sediment (Simpson and Batley 2007; EPA 2007). It is, therefore, important to consider environmental factors that can alter metal toxicity by affecting bioavailability. In marine sediments, bioavailability has been shown to be related to partitioning behavior in the development of equilibrium partitioning sediment benchmarks (ESBs) (EPA 2005). Chemical properties such as acid volatile sulfide (AVS), for example, determine the extent to which marine sediment metals would be in the form of insoluble and therefore non-bioavailable metal compounds. Risk to benthic organisms is better predicted by the amount of simultaneously extractable metals (SEM) that exceeds the amount of AVS. Therefore, the amount of excess SEM, which is the simple difference between SEM and AVS, should be used as an initial estimate of bioavailable metals in sediments. Consideration of marine sediment organic matter can further improve the accuracy of excess SEM by normalizing to the fraction organic carbon (SEM/f_{oc}) (EPA 2005; DeForest et al. 2021).

Consideration of excess SEM and carbon-normalized excess SEM is applicable to cadmium, copper, nickel, lead, and zinc, and to mixtures of these metals. In addition, the presence of AVS indicates that the marine sediments are chemically reducing, and therefore that chromium should not be in the oxidized hexavalent form (Berry et al. 2004). Measures of AVS and SEM, therefore, can be used to refine the understanding of the risk associated with many of the metals that are potentially associated with LFM and should be considered.

The equilibrium partitioning sediment benchmarks also indicate that risk can be related to porewater concentrations that exceed water quality criteria (EPA 2005). Samples collected from sediment porewater, therefore, can be used to refine and extend the principles of ESBs. Data from porewater have also proven to be more accurate than AVS and SEM, because they allow for the consideration of other chemical properties such as pH and major ions in a more comprehensive analysis (Santore et al. 2021). Sediment benchmarks based on SEM, AVS, and f_{oc} have upper and lower benchmarks; toxicity is deemed unlikely when excess SEM or its carbon-normalized form is less than the lower benchmark and likely when the upper benchmark is exceeded. There is uncertainty, therefore, when samples have values between the upper and lower benchmarks. Samples with this uncertain characterization can be refined as appropriate by considering porewater concentrations and bioavailability modeling approaches, such as the biotic ligand model (Santore et al. 2021).

2.5 BATHYMETRY

National Oceanic and Atmospheric Administration (NOAA) (2013) bathymetric data were obtained online and imported into GIS to inform sampling design.[1] The data show a patchwork of historical dredge activities and a relatively consistent sediment surface through the East Basin, East Basin Channel, and Cerritos Channel (within the survey area). Dredged areas are apparent along the northwest shoreline of the East Basin, in Slip No. 5, and along the eastern edge of East Basin just west of the marina. For example, clear dredge boundaries exist along shorelines where the navigation channel is encountered. Smooth sediment surfaces appear in and around the marina and at the head of Slip No. 5, indicating that dredging in those areas has been less frequent and to shallower depths. Isolated pockmarks on the sediment surface (e.g., within Slip No. 5) may have been caused by propeller wash

[1] Given that the bathymetric data are from 2013, conditions throughout the survey area may have changed as a result of maintenance dredging, sediment deposition, and vessel activity.

3 Sampling Design and Rationale

This section provides the rationale used to develop the proposed sampling design for marine sediments near the SATI facility.

3.1 MARINE SEDIMENT SAMPLING LOCATIONS

Sediment sampling locations were selected using a judgement-based design. The design goals are to:

- Collect marine sediment samples from locations close to the SATI facility most likely to be influenced by potential LFM deposition.
- Evaluate marine sediments for visible indications of LFM.
- Screen total metals and PCB concentrations against marine sediment benchmarks for potential benthic impacts.
- Evaluate metals bioavailability.
- For any constituents determined to be COPCs, evaluate if these may be derived from LFM.

As stated in the objectives of this SIWP (Section 1), this effort will be foundational to understanding the potential influence of LFM on chemical concentrations in marine sediment near the site.

Predominant local wind and tidal patterns are toward the east and south (Sections 2.3 and 2.4), although there are secondary wind patterns from the south and secondary tidal flows to the west. LFM has already been observed in sediment l samples collected on the Pasha wharf. Based on predominant patterns, and assuming that LFM emissions are mostly windblown, the greatest potential to encounter LFM in sediment will be along the SATI wharf and to the east, along the Pasha wharf.

Figure 1-2 shows the 15 preliminary sampling locations: 2 staggered rows along the SATI wharf and a single line extending 0.5 miles from the edge of the SATI facility boundary. Sampling locations were placed in rows 20 and 50 ft from the SATI wharf, corresponding to two sediment terraces at approximately -35 and -45 ft from the SATI wharf (POLA 2016). Additionally, a single sampling location was placed near the Yusen Terminals wharf to determine whether sediments to the west of the SATI facility are comparable to other nearby marine sediments with respect to chemical fingerprint and concentrations. All sampling locations were placed outside the navigation channel to avoid the influence of historical dredging activities; however, four were located in or near the 2016 dredge area along the SATI wharf (Figure 1-2), and the fingerprints of samples from those locations might reflect relatively recent inputs of LFM (since 2016). More sampling locations were placed adjacent to the SATI facility than to neighboring facilities, based on an assumption that more LFM will be encountered near the facility.

Individual sediment grabs will be collected using a pneumatically powered Van Veen grab sampler.[2] A minimum of four grabs will be collected per sampling location to ensure sufficient sediment volume for a broad suite of chemical and porewater analyses (see Section 3.2). Marine sediment from the upper 5 cm of the sediment from the mudline will be collected to reflect relatively recent sediment deposition and mixing into surface sediment by benthic organisms and physical processes such as vessel propeller wash (CSWRCB 2009). The upper 5 cm will also represent the layer to which most benthic invertebrates and fish are exposed, except larger invertebrates (e.g., deep-burrowing clams and head-down feeding polychaetes).

3.2 CHEMICAL ANALYSES

Existing auto shredder residue (ASR) literature and treatability studies indicate that certain metals are strongly associated with LFM (Terraphase 2014; MPCA 1995; Cioca and Ivascu 2015; Gonzalez-Fernandez et al. 2008; EPA 1991). LFM has generally been shown to potentially exceed California hazardous waste regulatory thresholds for zinc, lead, and copper (DTSC and CalEPA 2021). Additionally, polychlorinated biphenyls (PCBs) have been previously investigated relative to auto shredder fluff (EPA 1991). This SIWP is consistent with available literature by initially focusing on metals and PCBs.

Surface sediment samples collected at SATI will first be analyzed for metals, AVS-SEM, PCB congeners, total organic carbon (TOC), solids, and grain size. Archive samples (32 oz total) will be collected at each location for possible future chemical and physical evaluation. Samples for organic analyses can be held up to one year if frozen.

Porewater will be collected via centrifugation of surface sediment at the laboratory, filtered (0.45 µm), and then analyzed for metals, sulfide/sulfate, TOC/dissolved organic carbon (DOC), chloride, and alkalinity.

Analytical methods and sample holding times are provided in Tables 3-2 and 3-3. Analytical laboratories will meet the sample handling requirements described in this section. Additional details on laboratory methods, measurement quality objectives, and data management will be provided in the SAP(s).

Table 3-2. Sediment sample holding times

Parameter	Method	Container	Preservative	Holding Time
TOC	EPA 9060A	4-oz glass jar	cool to ≤ 6°C	28 days; 1 year if frozen
Percent solids	SM 2540B			6 months
Grain size	ASTM D4464 (laser)	16-oz plastic jar	cool to 4 ± 2°C	6 months

[2] Target sampling coordinates and sample collection method and handling details will be presented in a SAP, pending approval of this SIWP.

Parameter	Method	Container	Preservative	Holding Time
Metals	EPA 6020	4-oz glass jar	cool to ≤ 6°C; freeze to ≤ -20°C	6 months; 1 year if frozen
Mercury	EPA 7147			28 days; 1 year if frozen
Hexavalent Chromium	EPA 7196A		cool to ≤ 6°C	28 days
AVS-SEM	EPA-821-R-100	4-oz glass jar	cool to ≤ 6°C	14 days
PCB congeners	EPA 1668	4-oz glass jar	cool to ≤ 6°C freeze to ≤ -20°C	1 year until extraction, 1 year after extraction (if in the dark at ≤ -20°C)

ASTM – American Society for Testing and Materials
AVS-SEM – acid volatile sulfide-simultaneously extracted metals
EPA – US Environmental Protection Agency
PCB – polychlorinated biphenyl
SM – Standard Methods
TOC – total organic carbon

Table 3-3. Porewater sample holding times

Parameter	Method	Container	Preservative	Holding Time
TOC	EPA 9060A	125-mL amber glass	cool to ≤ 6°C; sulfuric acid to pH < 2	28 days
DOC	EPA 9060A	125-mL amber glass	cool to ≤ 6°C; filtered 0.45-µm filter within 48 hours; sulfuric acid to pH < 2	28 days
Metals[a]	EPA 1640 and or 200.8	125-mL HDPE	cool to ≤ 6°C; filtered with 0.45-µm filter; nitric acid to pH < 2 at least 24 hours prior to analysis	6 months
Mercury	EPA 1631	125-mL FLPE or glass bottle with FLPE lined lid	5 mL/L bromine monochloride	90 days
Sulfide	SM 4500-S2 D	250-mL HDPE[b]	cool to ≤ 6°C; add zinc acetate and sodium hydroxide to pH > 9	7 days
Sulfate	EPA 300.0	125-mL HDPE	cool to ≤ 6°C	28 days
Chloride	EPA 300.0			28 days
Alkalinity	SM 2320 B			14 days

[a] Metals include arsenic, cadmium, chromium, cobalt, copper, iron, lead, manganese, nickel, silver, and zinc.
[b] Containers for sulfide will be filled with no headspace or air bubbles in the bottle.

DOC – dissolved organic carbon
EPA – U.S. Environmental Protection Agency
FLPE – fluorinated high-density polyethylene
HDPE – high-density polyethylene
SM – Standard Methods
TOC – total organic carbon

4 Data Evaluation

The purpose of the data evaluation is to address the objectives stated in Section 1. Analysis of the marine sediment data will occur in conjunction with continued evaluation of on-wharf sediment data as analytical data is received by GSI Environmental. Both marine sediment and on-wharf sediment data will be used to further support the chemical characterization of LFM (see Investigation Report Section 4.2).

In addition, historical background sediment data will also be used to identify patterns associated with ambient conditions. While LFM is one possible source, given the setting there are multiple other industrial sources present as well as considerations about general background concentrations. To support data evaluation, categorically defined data subsets will potentially include different sampling areas (e.g., SATI, port background, and LA-2 background), studies, and/or sample clusters (based on fingerprinting). Examples of analyses would include, but not be limited to:

- Screening marine sediment data against applicable benchmarks (e.g., ERL and ERM)
- Considering potential bioavailability of metals using AVS-SEM and porewater data
- Univariate exploration (e.g., distribution plots and outlier analysis)
- Visual and statistical comparisons of site and background datasets (e.g., using box and whisker plots coupled with statistical analyses for comparison of distributions)

As appropriate and applicable, analyses will be run with and without outliers and using different non-detection substitution methods (e.g., zero, one-half, or full detection limit).

The results of this SIWP will be used to evaluate and determine any additional steps. The findings, conclusions, and recommendations of the data evaluation will be provided in the DER either as a standalone document for submission to DTSC or as part of the larger Off-Site Investigation study reporting.

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Appendix E3

Off-Site Light Fibrous Material Cleanup/
Removal Work Plan (Amended)

OFF-SITE LFM CLEANUP/REMOVAL WORK PLAN (AMENDED)

SA RECYCLING LLC
901 NEW DOCK STREET
TERMINAL ISLAND, CALIFORNIA

Prepared for:

SA Recycling LLC
901 New Dock Street
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GSI Job No. 6013
Issued: 22 April 2022

Job No. 6013

This work plan was prepared by the staff of GSI Environmental Inc., under the supervision of the Geologist(s) and/or Engineer(s) whose signature(s) appear hereon.

The findings, recommendations, specifications, or professional opinions were prepared in accordance with generally accepted professional engineering and geologic practice. No warranty is expressed or implied.

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OFF-SITE LFM CLEANUP/REMOVAL WORK PLAN (AMENDED)
SA Recycling LLC
901 New Dock Street, Terminal Island, California

TABLE OF CONTENTS

1.0 INTRODUCTION 1
1.1 Purpose 1
1.2 Definition of LFM 1
2.0 SITE BACKGROUND 2
2.1 Site Location 2
2.2 Meteorology 2
3.0 LFM INTERIM INVESTIGATION AND REMOVAL 2
4.0 CONCEPTUAL SITE MODEL 2
5.0 REMEDIAL ACTION GOALS 2
6.0 PROPOSED REMOVAL ACTIONS 3
7.0 CONFIRMATION SAMPLING 3
8.0 REMOVAL LOCATIONS 3
9.0 EQUIPMENT DECONTAMINATION 4
10.0 WASTE CHARACTERIZATION MANAGEMENT AND DISPOSAL 4
11.0 PERSONNEL AND QUALIFICATIONS 4
12.0 DATA EVALUATION AND REPORTING 5
13.0 SCHEDULE 5

Figures

Figure 1. Off-Site Investigation Area
Figure 2. Site Plan
Figure 3. Conceptual Site Model

Appendices

Appendix A. Health and Safety Plan

OFF-SITE LFM CLEANUP/REMOVAL WORK PLAN (AMENDED)
SA Recycling LLC, Terminal Island
901 New Dock Street, Terminal Island, California

1.0 INTRODUCTION

On behalf of SA Recycling LLC (SA Recycling), GSI Environmental Inc. (GSI) has prepared this Amended Cleanup/Removal Work Plan (Cleanup Work Plan) to address light fibrous material (LFM) identified in the implementation of the Off-Site LFM Investigation Work Plan (Investigation Work Plan), prepared for the SA Recycling scrap metal shredding and recycling facility located at 901 New Dock Street, on Terminal Island, California (referred to as the "SATI recycling facility" and the "Site;" Figure 1). The Investigation Work Plan has also been prepared by GSI and accompanies this Work Plan under separate cover.[1] Pursuant to direction from legal counsel, the Cleanup Work Plan is focused on LFM.

1.1 Purpose

The purpose of this Cleanup Work Plan is to remove any identified off-site LFM. This document amends a prior Cleanup/Removal Work Plan prepared by GSI and submitted to the California Department of Toxic Substances Control (DTSC) on 03 December 2021.

This Cleanup Work Plan will be guided by the findings of the Investigation Workplan. These work plans were prepared to address requirements of the DTSC's 30 September 2021 Summary of Violations (SOV), and relevant comments presented in DTSC's 28 January 2022 letter to SA Recycling regarding the 3 December 2021 amended work plans.

1.2 Definition of LFM

In its DTSC 28 January 2002 comments, DTSC requested the definition of LFM to be included as:

> "LFM is material produced during the metal shredding process which can be uncontrollably dispersed offsite due to wind, rain, or other factors if the LFM not adequately managed. LFM resulting from metal shredding operations typically consists of residues such as glass, rubber, automobile fluids, dirt, and plastics from shredded car dashboards, car seats, other non-metallic car parts, household appliances, and other sources. Samples of LFM have been shown to meet the criteria for hazardous waste in California due to concentrations of metals at levels exceeding the toxicity criteria defined in California Code of Regulations, title 22, section 66261.24(a)(2)(A)."

Unless wetted or properly contained, LFM may be susceptible to dispersion. If dispersed, LFM can mix with sediment, debris, trash, and vegetation, becoming matted and less mobile.

[1] GSI, 2022a, Off-Site LFM Investigation Work Plan (Amended), SA Recycling LLC, 901 New Dock Street, Terminal Island, CA, 22 April.

2.0 SITE BACKGROUND

The SATI recycling facility operations include shredding automobiles, appliances, and other scrap metal materials. Detailed facility location, surface water and meteorological conditions, Site use history, regulatory oversight, and Port of Los Angeles dredging are presented in the Investigation Work Plan.

2.1 Site Location

The SATI recycling facility is located at 901 New Dock Street, on Terminal Island in the Port of Los Angeles, California (Figure1). The Site consists of 27 acres, making up Berths 210 and 211 along the Cerritos Channel on the northern portion of Terminal Island (Figure 2). The facility is within an industrial area of the port, bounded by a shipping container terminal to the west, a bulk cargo handling, stevedoring and vessel loading and unloading facility to the east, and New Dock Street and railroad right-of-way to the South. A recreational marina is located across the Cerritos Channel to the northeast, and other industrial areas are located across to the north and northwest. The Yusen Terminals LLC (YTI) East and Pasha Stevedoring and Terminals (PST) terminal facilities are located to the east of the SATI recycling facility (Figure 2).

2.2 Meteorology

During the spring, summer, and early fall, the predominant wind direction at Terminal Island is from the Pacific Ocean from the southwest, with occasional winds from the northwest. During late fall and winter months (November, December, and January), the predominant wind direction is from the northwest, with occasional wind originating from the southwest. Wind speed is typically below 15 miles per hour; however, it can exceed 20 miles per hour. Two representative wind roses for the period 20 September 2016 to 30 July 2021 are shown on Figure 2.

3.0 LFM INTERIM INVESTIGATION AND REMOVAL

GSI performed interim investigation and removal activities from October 2021 to April 2022 on the YTI East and PST facilities east of the SATI recycling facility. A summary of removal activities and analytical results are summarized in the technical memorandum attached as Appendix B of the Investigation Work Plan.[2]

4.0 CONCEPTUAL SITE MODEL

The preliminary Conceptual Site Model (CSM) is presented in the Investigation Work Plan, and shown on the attached Figure 3, and will be updated following completion of the off-Site investigation, as warranted.

5.0 REMEDIAL ACTION GOALS

The remedial action goals are to remove identified off-Site LFM. Off-Site LFM removal areas will be identified during implementation of the Off-Site Investigation, and removal planning will be initiated in accordance with this Cleanup Work Plan. As described in Section 6.2 of the Investigation Work Plan, a procedure is proposed wherein the maximum measured concentrations of each LFM-related constituent are compared to regulatory screening criteria for ecological or human receptors as appropriate.

[2] Ibid.

Identification of a COPC via this screening level assessment is not an indication of risk or actual harm, rather, this step creates the subset of chemicals that will be further evaluated to assess whether removal activities are warranted. This Cleanup Work Plan may be revised, as appropriate, to propose remedial goals based on the findings of the off-site investigation.

6.0 PROPOSED REMOVAL ACTIONS

All work will be conducted in accordance with GSI's site-specific health and safety plan (HASP), attached as Appendix A.

Cleanup locations will be identified during implementation of the Investigation Work Plan. Any observed LFM will be noted on field logs, mapped, and documented in a photographic log. In addition, planning will be initiated for removal in accordance with this Cleanup Work Plan. All cleanup locations will be documented in a post-cleanup photographic log. Various cleanup methods will be used at each location, depending on the location's conditions and the state of the LFM. Necessary steps will be taken for removing LFM identified inside storm grates or utility vaults. Storm grates will be manually removed, and material will be vacuumed from the grate interior lip, sides, and bottom of the vault. If a drain hole is present in the bottom of a vault, it will be temporarily plugged prior to cleanup activities and the plug will be removed following completion of cleanup at that location. The following equipment may be used for cleanup:

- TYMCO Regenerative Sweeper (or equivalent) equipped with polymer/nylon brushes – to clean surface area long recommended routes;
- Portable vacuums with high efficiency particular air (HEPA) filter ("shop-vacs"); and
- Shovels, brooms, scrapers, and brushes.

In the event that LFM is identified that will require the use of a regenerative sweeper, in accordance with the Regenerative Sweeper Operator's Manual and to optimize effectiveness, the Regenerative Sweeper's blower should be adjusted to between 1,800 to 2,000 revolutions per minute and when sweeping, the sweeper should travel under 5 miles per hour. Water misting or other dust minimization methods will be employed as necessary based on observed conditions during cleanup activities.

7.0 CONFIRMATION SAMPLING

As described in the Investigation Work Plan, if LFM or suspected LFM is observed in upland or marine sediment, the LFM will be collected and removed. Adjacent sediment that does not have suspected LFM will be collected and analyzed for target constituents to guide removal actions. If LFM is identified in marine sediment, a proposed marine sediment removal action and post-removal confirmation sampling plan will be prepared and submitted to DTSC as an addendum to this Cleanup Work Plan.

8.0 REMOVAL LOCATIONS

Prior to initiating the removal actions outlined in this Cleanup Work Plan, a map will be prepared that delineates the areas where LFM was observed during the off-Site investigation. A map of the areas where any follow-up removal is proposed will be included in an Off-Site Investigation and Cleanup Report that will be prepared and provided to DTSC.

9.0 EQUIPMENT DECONTAMINATION

Tools and equipment that will be used to remove the LFM will be washed with potable water and detergent and rinsed with potable water before and between each use. Rinse water will be contained in one or more drums, as necessary for subsequent waste profiling and disposal.

10.0 WASTE CHARACTERIZATION MANAGEMENT AND DISPOSAL

A shop vac with HEPA filter or regenerative sweeper will be used to vacuum LFM and surface sediments in open area locations. Removed material will be placed within a covered roll-off container.

Solid and liquid accumulated as part of the removal action will be containerized in 55-gallon drums and bins, labeled pending analysis, and stored on SATI property pending waste profiling and off-Site disposal. The wastes will be sampled and characterized for off-site disposal in accordance with California Code of Regulations Title 22, Section 66262.11 (Hazardous Waste Determination).

11.0 PERSONNEL AND QUALIFICATIONS

A GSI team of 40-hour trained geologists, scientists, engineers, and technicians will manage the LFM cleanup. All field project personnel, including subcontractors, will have completed their OSHA 40-hour HAZWOPER training with 8-hour refresher courses. To prevent unauthorized access during removal actions, cones and caution tape will be used to demarcate the work area where unauthorized personnel are not allowed to enter. The GSI Site Safety Officer will be responsible for preventing unauthorized persons from entering the work area during cleanup activities.

The Cleanup Work Plan personnel responsible for assisting with the cleanup activities are summarized below.

Name (Organization)	Title	Contact Number	Responsibilities/ Duties
Lindsay Maine (SAR)	Environmental Manager	714-632-2031	• Secure access to neighboring properties. • Coordinate management of containerized materials pending disposal.
Timothy F. Wood, PG, CHG (GSI)	Vice President/ Principal Geologist	949-679-1070 x351	• Manage Off-Site Cleanup Work Plan. • Coordinate GSI personnel and SAR and subcontractors assisting with Cleanup Work Plan Implementation. • Ensure implementation of the Cleanup Work Plan. • Evaluate cleanup effectiveness. • Advise any focus areas that need additional attention.
Don Strenger (ICS)	Preconstruction Manager	949-870-8725	• Provide 40-hour HAZWOPER trained laborers and equipment to conduct the cleanup.

12.0 DATA EVALUATION AND REPORTING

Upon completion of the cleanup, GSI will prepare an Off-Site Cleanup Report documenting the following at a minimum:

- A description of the completed cleanup activities;
- Maps showing cleanup locations;
- Tables listing cleanup locations and methods;
- A log of generated remediation wastes;
- Copies of waste sample laboratory reports;
- Copies of waste manifests; and
- Photographs taken during implementation of the Cleanup Work Plan.

13.0 SCHEDULE

Task Description	Estimated Time
Obtain access to properties requiring cleanup	2 weeks
Perform LFM cleanup/removal	4 weeks
Reporting	2 weeks
Total Estimated Time	8 weeks

OFF-SITE LFM CLEANUP/REMOVAL WORK PLAN (AMENDED)
SA Recycling LLC
901 New Dock Street, Terminal Island, California

FIGURES

Figure 1. Off-Site Investigation Area
Figure 2. Site Plan
Figure 3. Conceptual Site Model

N

LEGEND

0.5 Mile Radius around Site

Notes

Aerial imagery provided by Esri ArcGIS Online, November 2020.

Feet
0 300 600

Projected Coordinate System
Datum: NAD 83
State Plane California Zone V
Units: Feet

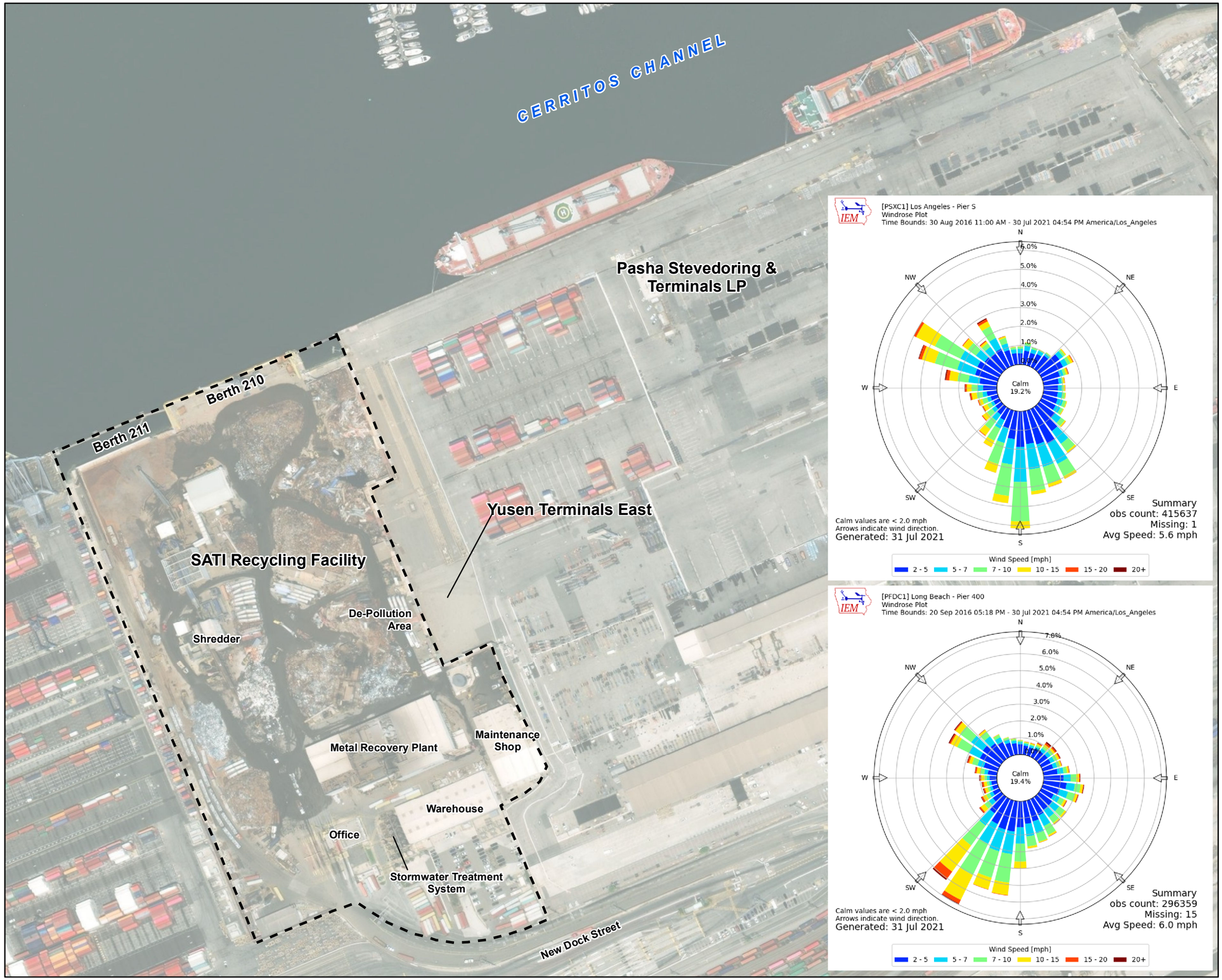
GSI ENVIRONMENTAL

OFF-SITE INVESTIGATION AREA

SA Recycling LLC
901 New Dock Street, San Pedro, California

GSI Job No.	6013	Drawn By:	AV
Issued:	19-Apr-2022	Chk'd By:	BGM
Map ID:	SATI_SampLocsMiRad	Appv'd By:	TFW

FIGURE 6



N

LEGEND

Property Boundary

Notes

1) Aerial imagery provided by Esri ArcGIS Online, November 2020.
2) Windrose plot downloaded from: https://mesonet.agron.iastate.edu/sites/windrose.phtml?station=PFDC1&network=CA_DCP, on October 14, 2021.

Feet
0 100 200

Projected Coordinate System
Datum: NAD 83
State Plane California Zone V
Units: Feet

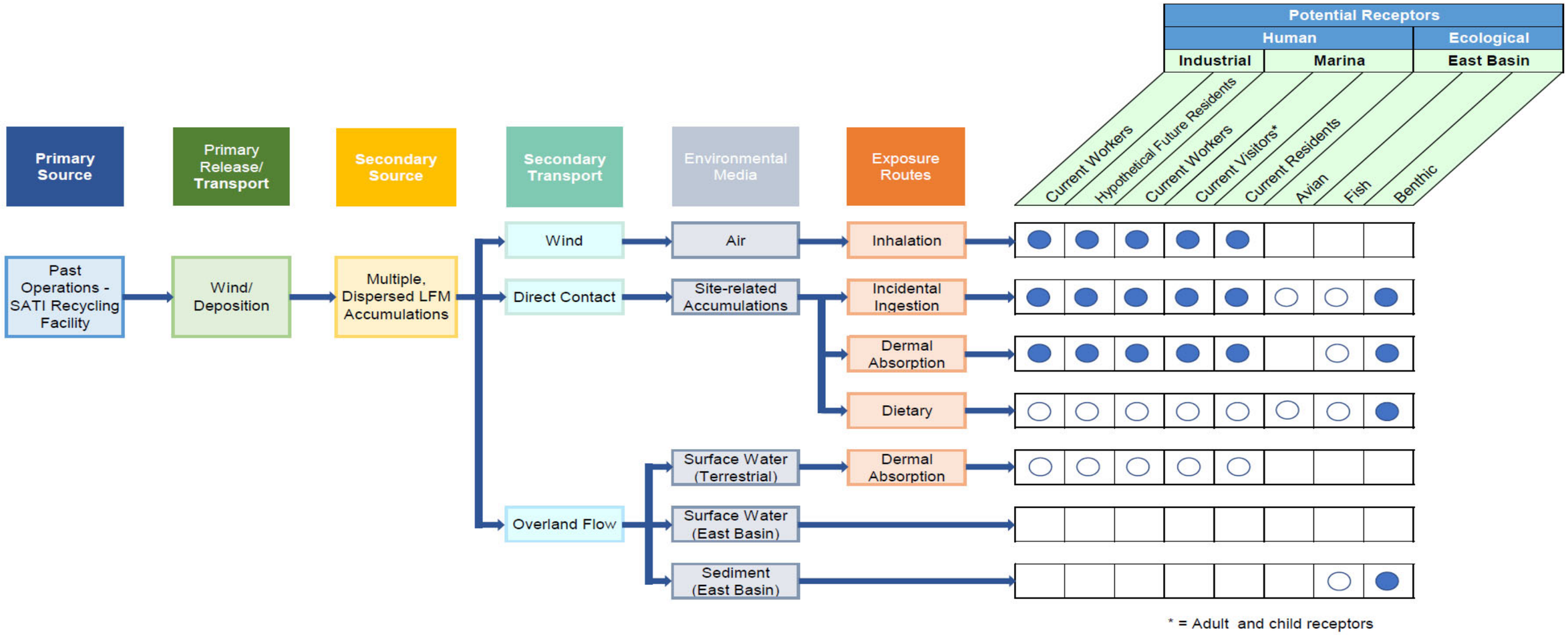
GSI ENVIRONMENTAL

SITE PLAN

SA Recycling LLC
901 New Dock Street, San Pedro, California

GSI Job No.	6013	Drawn By:	GM
Issued:	22-Apr-2022	Chk'd By:	TW
Map ID:	SATI_SiteMap	Appv'd By:	TW

FIGURE 2



EXPLANATION

- ● Potentially complete and significant pathway; will be evaluated quantitatively.
- ○ Potentially complete but insignificant pathway; will be evaluated qualitatively.
- ☐ Incomplete pathway; will not be evaluated (based on current information).

GSI ENVIRONMENTAL

FIGURE 3
CONCEPTUAL SITE MODEL
SA Recycling LLC
901 New Dock Street, San Pedro, California

GSI Project: 6013
Issued: Apr-22-2022
Drawn By: GM
Approved By: TW

OFF-SITE LFM CLEANUP/REMOVAL WORK PLAN (AMENDED)
SA Recycling LLC
901 New Dock Street, Terminal Island, California

APPENDICES

OFF-SITE LFM CLEANUP/REMOVAL WORK PLAN (AMENDED)
SA Recycling LLC
901 New Dock Street, Terminal Island, California

APPENDIX A

Health and Safety Plan

GSI ENVIRONMENTAL INC.

SITE-SPECIFIC HEALTH AND SAFETY PLAN

SA Terminal Island

701 New Dock Street, Terminal Island, CA 90731

GSI Job No.:	6013	Revision No.:	1
Plan Prepared By:	Josh Voss & Don Kubik	Date:	12/02/2021
Plan Reviewed By:	Timothy Wood	Date:	12/02/2021
Plan Approved By:	Don Kubik	Date:	12/02/2021

ACKNOWLEDGEMENT

I, the undersigned, have been provided with a copy of this Site-Specific Health and Safety Plan. I have read the Plan, have attended a project safety orientation session conducted by GSI Environmental Inc. (GSI), and have had the opportunity to ask questions about health and safety issues relating to this project. I understand that it is my responsibility to abide by this Plan, and that physical injury, damage and other harm to myself or others could result from my failure to do so.

Name & Company (please print)	Signature	Date

1.0 SCOPE AND APPLICATION

This Site-Specific Health and Safety Plan (SS-HASP) has been prepared in accordance with 29 CFR §1910.120, 8 CCR 5192 and is a Site-specific supplement to the GSI company Environmental, Health and Safety (EHS) Program Manual for Field Operations (the "EHS Program Manual"), which specifies GSI's general health and safety policies and procedures. This SS-HASP is to be provided to all Site workers under the direction of GSI for their review. In addition, this SS-HASP, the GSI EHS Program Manual, and applicable client safety guidelines will remain on-Site at all times during the project, and will be available to all project personnel upon request from the GSI Site Safety Officer (SSO) or other designated representative.

This SS-HASP specifies health and safety protocol to be followed during implementation of the project work scope by all site personnel under the direction of GSI, including employees and subcontractors. In the event of conflicting standards between this plan or the GSI EHS Program Manual and client health and safety requirements, the more protective standard shall apply. All personnel are required to comply with this SS-HASP and to indicate their agreement to do so by signing the cover page.

2.0 PROJECT DESCRIPTION

2.1 General Information

Client/Site Owner	SA Recycling LLC (SAR)
Project Name and General Description	SA Terminal Island – Light Fibrous Material (LFM) Investigation and Removal
Project Location (Physical Address)	0.5-mile radius of 901 New Dock Street, Terminal, Island, CA 9073 (Figure 1)
Detailed Location Information	The Site occupied by a Pasha Stevedoring & Terminals, LP (PST) facility located at 701 New Dock Street in Terminal Island, California and other nearby properties. The PST facility is located adjacent to the east of SAR's Terminal Island scrap metal shredding and recycling facility.
Start Date/Duration/ Other Schedule Info.	LFM Investigation: 8 November 2021 starting at 7am. LFM Removal following investigation completion.

2.2 Site Description: Provide site description / attach site plan

The Site area is primarily occupied by a PST facility. The California Department of Toxic Substances Control (DTSC) recently collected samples containing LFM at the PST facility, the results of which are presented in DTSC's 1 October 2021 Sampling Report. DTSC's sampling and analysis identified elevated concentrations of some metals in the samples, and polychlorinated biphenyls (PCBs) in the majority of the samples.

In summary, the concentration of zinc exceeded its Total Threshold Limit Concentration (TTLC) of 5,000 milligrams per kilogram (mg/kg) in six (6) of the eight (8) samples (maximum reported concentration of 11,900 mg/kg in SATI-BF-03) and lead exceeded its TTLC of 1,000 mg/kg in 5 of the 8 samples (maximum reported concentration of 1,590 mg/kg in SATI-BF-03). None of the samples collected exceed the TTLC for cadmium. Soluble metals analysis reported lead and

zinc concentrations above their STLCs in each of the 8 samples and cadmium above its STLC in 6 of the 8 samples. No samples exceeded their TCLP limits. PCBs were reported in 7 of the 8 samples at concentrations between 0.87 and 3.09 mg/kg; PCBs were not detected in sample SATI-BF-08.

On 6 October 2021, GSI, SAR, and PST personnel performed a reconnaissance of the western and northern portions of the PST facility to observe DTSC's eight sampling locations, and assess the presence and nature of LFM at those locations and surrounding areas. GSI also collected co-located samples to those collected by DTSC.

GSI primary samples PT01 through PT08, companion samples to DTSC samples SATI-BF-01 through SATI-BF-08, appeared to contain LFM and had concentrations of cadmium, lead, and zinc at generally similar concentrations and relative distribution to DTSC sample analysis.

2.3 Project Tasks: Outline major tasks, attach detailed workplan and/or operating procedures

The project tasks will include the following:

LFM Inspection: GSI will perform reconnaissance of surrounding properties where access is provided to inspect for the presence of LFM.

LFM Removal: Innovative Construction Solutions (ICS; subcontractor to GSI) and/or SAR personnel will perform the removal of LFM. The material will be carefully removed using a combination of hand tools (e.g shovels and brooms) and vacuums. GSI will be on-Site to provide oversight of the removal activities.

Waste Disposal: Waste materials will be containerized and characterized for disposal at an authorized off-Site facility in accordance with applicable local and federal regulations. GSI will assist the client to coordinate disposal of waste at an appropriate facility.

3.0 EMERGENCY RESPONSE PROCEDURES

Specify emergency reporting contact. Provide Plant Emergency Response Contact with phone number(s) where applicable. Call 911 for emergencies located elsewhere.

Report all accidents immediately to:

Timothy Wood (GSI Environmental): (949) 283-5696
Vinnie Robino (GSI Environmental): (949) 422-8586
Jeff Farano (Client Contact – SA Recycling LLC): (714) 471-4411

Describe plant siren/ alarm signals, if applicable, and response

No Site-specific training is necessary on-Site. The Site does not have any specific alarm signals

Location of emergency assembly area(s) and evacuation route

In case of an emergency, assemble near the entrance to of the PST facility.

Describe other applicable emergency response measures to be taken (decontamination and/or medical treatment)

In case of an emergency, call 911

Location and phone number of nearest urgent care facility (Map Attached; Figure 2)

The nearest urgent care facility is the **Concentra Urgent Care**, 3.1 mile from the Site (approximately 7-minute drive time, dependent on traffic). Directions to the urgent care are as follows:

1. Head east on New Dock St
2. Turn right onto Pier S Ave
3. Pier S Ave turns left and becomes CA-47 N
4. Use the 2nd from the right lane to take the ramp to I-710 N
5. Keep left at the fork and merge onto I-710 N
6. Take exit 1E toward Downtime
7. Continue on W Ocean Blvd
8. Turn right onto World Trade Center and the destination will be on the left.

Concentra Urgent Care
100 Oceangate P245
Long Beach, CA 90802

Phone
Phone number: (562) 432-2821

Hours
Monday through Friday – 7AM to 6PM
Saturday & Sunday – Closed

Refer to Figure 2 – Urgent Care Location Map.

Location and phone number of nearest hospital with emergency room (Map attached; Figure 3)

The nearest hospital with an emergency room is the **Dignity Health – St. Mary Medical Center**, 4.7 miles from the site (approximately 16-minute drive time, dependent on traffic). Directions to the hospital are as follows:

1. Head east on New Dock St
2. Turn right onto Pier S Ave
3. Pier S Ave turns left and becomes CA-47 N
4. Use the 2nd from the right lane to take the ramp to I-710 N
5. Keep left at the fork and merge onto I-710 N
6. Take exit 1E toward Downtime
7. Continue on W Ocean Blvd
8. Turn left onto Long Beach Blvd
9. Turn right onto E 10th St
10. Turn left onto Elm Ave
11. Turn right onto Linden Ave and the destination will be on the right.

Dignity Health – St. Mary Medical Center
1050 Linden Ave
Long Beach, CA 90813

Phone
Emergency Center (562) 491-9000
Hospital Information (562) 491-9000

Refer to Figure 3 – Hospital Location Map.

4.0 Project Organization, Personnel, & Training Requirements

4.1 Key Personnel

Position	Name	Phone (Cell Phone)
GSI Principal-in-Charge (PIC)	Timothy Wood, PG, CHG	(949) 679-1070 (949) 283-5696 (cell)
GSI Project Team Leader (PTL)	Vinnie Robino, PG	(949) 679-1070 (949) 422-8586 (cell)
GSI Site-Safety Officer (SSO)	Bianca Mintz	(808) 561-0775 (cell)
GSI SoCal H&S Representative	Josh Voss	(815) 451-1369 (cell)
GSI Certified Industrial Hygienist	Don Kubik Jr., PG, CIH, CIT	(815) 451-1369 (cell)
Client Contact	Jeff Farano Sr.	(714) 471-4411 (cell)
Site Contact	Todd Peterson	(360) 556-8530 (cell)
ICS Project Manager	John White	(714) 240-1229 (cell)

4.2 Training Requirements – Check all that apply and list any additional

X	OSHA 40-hr HAZWOPER	X	OSHA 8-hr Annual Refresher
	Contractor Safety Council (CSC) – Basic +		TWIC Card
	Site-Specific (CSC or on-site)		
	Unit-Specific		

4.3 Requirements for Respirator Use

Will respirator use potentially be required? X_____Yes _____No

If yes, GSI Respiratory Protection Plan, found in Section 6.0 of the GSI HASP, is applicable. Affected personnel must have physician's written opinion certifying fitness to use respirator based on pulmonary function test and other considerations, be trained in proper respirator use, and have quantitative fit test.

4.4 Personnel Documents

All field project personnel, including subcontractors, are to maintain training and medical records at their respective offices and provide to GSI if requested. OSHA 40-hour HAZWOPER training with 8-hour refresher courses is required of all field personnel.

5.0 POTENTIAL HAZARDS & HAZARD CONTROL MEASURES

5.1 General Site Access Control

The work zone will be kept clear of unnecessary materials. If necessary, caution tape will be put around the work areas to demarcate an area where unauthorized personnel are not allowed to enter. The GSI Site Safety Officer will be responsible for preventing unauthorized persons from entering the work area when on-Site.

5.2 Project Personnel Access Control

Sign in and out with the GSI Site Safety Officer.

5.3 Underground Utilities Clearance

Specify procedures for obtaining clearance of locations for drilling, excavation, or other subsurface penetrations. Utility clearance will include at least a 48-hour notification to Underground Service Alert (USA) of California, the state underground utility notification authority. Below are the color designations to be used by the underground utilities surveyor.

WHITE – PROPOSED EXCAVATION

PINK – TEMPORARY SURVEY MARKINGS

RED – ELECTRIC POWER LINES, CABLES, CONDUIT AND LIGHTING CABLES

YELLOW – GAS, OIL, STEAM, PETROLEUM OR GASEOUS MATERIALS

ORANGE – COMMUNICATION, ALARM OR SIGNAL LINES, CABLES OR CONDUIT

BLUE – POTABLE WATER

PURPLE – RECLAIMED WATER, IRRIGATION AND SLURRY LINES

GREEN – SEWERS AND DRAIN LINES

5.4 General Work Hazards and Avoidance

General work hazards include slip, trip, and fall hazards, head or foot injuries from falling or dropped objects, strains from over-exertion or incorrect lifting, electrical shocks, etc. These hazards can be controlled by good housekeeping measures and safe work practices, as outlined below. See also GSI HASP.

Housekeeping Measures:

- Excess brush or high vegetation should be cleared from the work area to the extent practical prior to start of the job.
- The job Site must be kept clean and free of trash and debris. Trash will be placed in bags or other suitable containers when generated. Disposable PPE must be disposed in designated containers upon removal.
- Materials such as lumber, cement, etc. will be neatly stored in a designated area.
- Tools and equipment must be returned to the tool box or designated area when no longer in use.

General Safe Work Practices:

- Use buddy system.
- Stay alert at all time to activities in your surroundings. Watch for on-coming vehicles, other workers, and overhead hazards.
- Work at a deliberate pace; do not rush a job.
- Avoid heavy lifting and lift with knees bent.
- Use tools only for their intended use, and make sure tools are in good condition. Inspect power tool and extension cords prior to use.
- Maintain safe distance (at least 10 feet and an additional 4 inches for every 10 kilovolts (kV) over 50 kV) between drill rig mast or other overhead equipment and overhead lines.
- Avoid unauthorized entry to restricted areas including confined space areas.
- Do not operate plant process equipment; do not open or close valves

- Proper PPE (specified below) must be worn at all times. PPE must be inspected regularly and properly maintained.
- Remove gloves and wash hands before handling food or tobacco products.

5.5 Fire and Explosion Hazard Mitigation

- Gasoline and other fuels must be stored in steel safety cans with mesh flame arresters and spring-mounted relief vent mechanisms. Flammable and combustible materials including paints and solvents must be properly stored away from sources of ignition.
- Fire extinguishers must be present on all vehicles, and drilling and excavation equipment, and in all areas where spark producing equipment is in use.

Other Measures (check as applicable):

_X_ Smoking permitted only in designated areas, or
____ Smoking not permitted
____ Matches and lighters not permitted onsite
____ Hot-work permits must be obtained for spark-producing equipment in designated areas
____ Other _____

5.6 Heat-Related Disorders

The major varieties of heat-related disorders, their related symptoms and appropriate treatment are listed below in order of increasing severity.

Condition & Related Symptoms	Heat Stress	Heat Exhaustion or Heat Syncope	Heat Stroke
Cramping	May be present	May be present	Absent
Mental State	Faint, dizzy, fatigue	May be disoriented	Stupor or coma
Skin & Complexion	Cool, moist, flush; rash may be present.	Cool, pale, moist	Red, hot, dry
Temperature	Normal	Normal to low	Very high (>105° F)
Pulse	Rapid (>110 beat /min)	Rapid, weak	Rapid, bounding
Blood Pressure	May be low	May be low	May be high in early stages
Treatment	Give water & electrolytes, loosen or remove clothing, move to shade	Give water & electrolytes, loosen or remove clothing, move to shade	Provide rapid cooling by immersion; cover in wet cloth and transport to emergency room

Prevention Measures: All heat disorders are caused by loss of fluids and the body's inability to cool itself. Heat stress can be prevented by the following measures:

- Pre-hydrate before going into the field: water or water-electrolyte drinks are preferable to caffeinated beverages or soft drinks. Refrain from alcohol the night before field work.
- In the field drink frequently. Numerous small drinks at a tepid temperature are better than rapid, large volume intakes of iced drinks.
- Rest at least a few minutes every hour or two.
- Observe co-workers for signs of heat stress.

OSHA identifies the following Risk Levels for given values of the heat index and recommends increasing Protective Measures to be implemented at each level.

Heat Index	Risk Level	Protective Measures
< 91° F	Lower (Caution)	Basic heat safety and planning
91° to 103° F	Moderate	Implement precautions and heighten awareness
103° to 115° F	High	Additional precautions to protect workers
> 115° F	Very High to Extreme	Aggressive measures (e.g., reschedule non-essential work)

5.7 Heavy Equipment Operations

During removal activities, heavy equipment must be in good condition, if used. Particular attention should be paid to the condition of cables and hoisting equipment. The equipment must be equipped with a back-up beeper. Barricades or caution tape should be used as needed to exclude unauthorized personnel from the work area.

During removal activities, equipment should be positioned to allow for adequate work room and the area kept free of trip and slip hazards. Care must be taken to avoid the catching of loose clothing in moving parts, and to keep hands free of pinch points. Proper PPE including hard hat, safety glasses, gloves, hearing protection, and safety shoes must be worn.

All vehicles or mechanical equipment that may have all or parts of its structure near energized overhead lines should maintain an operating distance of at least 10 feet of clearance with distance increased by 4 inches for every 10 kV over 50kV.

All heavy equipment must employ the warning methods while the vehicle is backing up, as described in 8 CCR 1592, including:

- Automatic back-up alarm;
- Automatic braking device;
- A spotter directing the vehicle;
- Inspection of the entire perimeter of the vehicle prior to backing up; and/or
- Prohibiting foot traffic in the work area.

5.8 Confined Space and Excavation Safety

All personnel must obey all posted restrictions on entry to confined spaces. Excavations deeper than 4 ft should not be entered for any purpose unless 1) the excavation walls are properly shored or are sloped at a 1:1 slope, or less steep, and there is no danger of collapse or engulfment; 2) a suitable means of egress such as ramp, stairs or ladder is located so as to require no more than 25 ft of lateral travel to reach it; and 3) testing demonstrates a hazardous atmosphere is not present.

5.9 Potential Chemical Exposure Hazards

Chemicals of potential concern (COPCs) are potential chemical exposure hazards that field personnel should be aware of removal and are discussed in Section 2.2. Based on previous sampling results for samples collected by DTSC and GSI, PCBs, cadmium, lead, and zinc are considered COPCs.

The table below summarizes primary COPCs, and the maximum expected concentrations in soil and/or water, to the extent known. NIOSH Pocket Guide printouts are provided in Attachment 2.

Constituents of Concern (COCs)	Exposure Limits[1]			I.P.	Max. Expected Concentration or Free-Phase (FP)		Health Hazard Target Organ Route of Entry
Chemical Name/ CAS No.	**PEL/ TLV (mg/m^3)**	**STEL (mg/m^3)**	**IDLH[2] (mg/m^3)**	**(e.V)**	**Soil (mg/kg)**	**Water (mg/L)**	Ca = Carcinogen Abs = Skin Absorption Con = Skin or Eye Contact Inh = Inhalation Ing = Ingestion
Cadmium [7440-43-9]	0.005	NA[3]	50	NPV[4]	29	UNK[5]	Inh, Ing
Lead [7439-92-1]	0.050	NA	100	NPV	1,590	UNK	Inh, Ing, Con
Zinc [1314-13-2]	5	NA	500	NPV	11,900	UNK	Inh
PCBs [53469-21-9]	1	NA	10	NPV	1.93	UNK	Ca, Inh, Ing, Abs, Con

1 Unless otherwise noted, Permissible Exposure Limits (PEL) and Threshold Limit Values (TLVs) are permissible time-weighted average exposure limits (ppm in air), which must not be exceeded for an 8-hour work-day/40-hour work week. Short-Term Exposure Limits (STELs) must not be exceeded over a 15-minute period.
2 IDLH = Immediately Dangerous to Life or Health; must not be exceeded at any time.
3 NA = Not available or not applicable
4 NPV = No published value
5 UNK = Unknown
6 Exposure limits and associated health hazards can be found in the NIOSH Pocket Guide to Chemical Hazards and the ACGIH Guide to TLVs and BEIs.

The following equation can be used to estimate an 8-hour maximum hypothetical time weighted average concentration of COPCs in air.

$$\text{Dust AL(for one dust)} = EL/(\ COPC_{LFM}\ \times SF \times 10^{-6}\ (kg/mg))$$

$$\text{Dust AL (for mixed dusts)} = (10^{-6}\ (kg/mg)/SF)\ /\text{Sum of}\ (\ COPC_{LFM}\ /EL)$$

where:
Dust AL = dust action level [mg/m_3]
EL = exposure limit (Cal/OSHA PEL) [mg/m^3]
SF = safety factor of 1 [unitless]
$COPC_{LFM}$ = representative COPC concentration in LFM [mg/kg]

Using the maximum concentrations in the table above, airborne concentrations of the LFM would need to be in excess of 25 mg/m^3 to reach the PELs of the COPCs.
Based on this information, maintaining dust levels below the Cal/OSHA PELs for particulates (10 mg/m^3 for total dust and 5 mg/m^3 for respirable fraction) would keep workers well under the Cal/OSHA regulatory enforceable PEL for the COPCs.

To minimize potential chemical exposure, the following measures will be taken:

- SDS must be provided for any chemical brought on-site for project use.
- Workers should remain upwind of contaminated materials to the extent practical.
- PPE specified below will be worn prevent skin or eye contact with constituents.
- Air quality monitoring will be conducted and respiratory protective equipment used as needed, as described below.
- Eating, drinking, smoking, gum chewing and oral tobacco use are not permitted in areas where chemical exposure could occur.

- Workers must remove gloves in the work area and drink from a water source outside the immediate work zone.
- PPE must be removed and hands thoroughly washed prior to breaking for meals.

5.10 Other Potential Hazards

During removal activities, make sure proper PPE (level D) is worn (hard hat, steel-toe boots with appropriate traction, safety glasses, gloves, ear protection). A N95 particulate mask should be worn as well during removal activities. Be careful when moving around heavy equipment. To prevent heat-related illness, take frequent breaks and drink plenty of fluids throughout the day.

Dust may be generated during removal activities. Dust control measures will be implemented to minimize dust generation. General dust control measures will include:

- sprinkling water to maintain soil moisture during removal and loading activities;
- covering all containers with soil;
- sweeping work areas if visible soil material is present;
- restricting non-essential traffic in the project area;
- minimizing drop heights while loading containers; and
- covering exposed affected soil or stockpiles with secured plastic sheeting.

COVID-19

Due to the outbreak of the novel Coronavirus Disease 2019 (COVID-19), GSI's Pandemic Disease Plan (Addendum) will be implemented for GSI employees and subcontractors (Attachment 3). Please review to the Addendum appended to the GSI Employee Procedures Handbook: Appendix H and attached to this SS-HASP. GSI field staff will review the COVID-19 Addendum before field work begins each day at the daily tail-gate meeting. Below is a list of Site-specific COVID-19 guidance:

- There are no Site-specific COVID-19 screening requirements. GSI staff will be traveling to and from the Site in separate vehicles.
- Face masks may be required to be worn in California when social distancing (separation of 6 feet or more) is not attainable and therefore GSI staff and subcontractors should wear face coverings when within 6 feet of other field personnel.
- Each GSI and subcontractor personnel are required to bring their own face covering such as cloth masks to the Site.

6.0 AIR QUALITY MONITORING

Dust monitoring will initially be conducted to verify that dust concentrations are below the Cal/OSHA PELs for total and respirable particulates and that N95 particulate masks provide adequate respiratory protection. Monitoring will be conducted using a portable dust monitor such as a TSI DUSTTRAK Aerosol monitor. Field personnel will perform dust monitoring during initial LFM cleanup activities, which will begin in the western portion of the PST facility, closest to the SATI facility where LFM deposits have been observed. Initial dust monitoring will be performed in the breathing zone during LFM removal actions. The Site Safety Officer will verify that all instruments are operating correctly before they are brought to the Site. Background dust measurements will be collected at the start of the work period and at least once later during work activities, preferably upwind from the work area. Based on initial dust monitoring, dust control measures and the respirator protection program will be adjusted, if necessary.

7.0 PERSONAL PROTECTIVE EQUIPMENT (PPE)

7.1 Level D PPE

A minimum of Level D PPE is required for all site personnel at all times, upgraded as necessary depending on task and conditions. Basic Level D PPE shall include the following elements: **1)Hard Hat** (w/ mono goggles); **2)Safety Glasses** (w/side shields); **3)Safety Shoes** (w/steel toes); **4)Body Covering** (long pants, shirt w/ sleeves, collar). Basic Level D equipment will be supplemented as follows:

7.2 Supplemental Level D PPE

	Item	**When/Where to be Used**
	Flame Retardant Clothing (FRC)	
X	Hearing Protection	Around heavy machinery
X	Work gloves	When using hand tools
	Latex or vinyl surgical gloves	
X	Neoprene or Nitrile gloves	When handling or removing LFM
X	Tyvek Coveralls	Have available if needed
	Polycoat Tyvek Coveralls	
	Chemical-resistant boots	
	Face Shield	
X	Face Coverings (COVID-19 related)	As required by State or County guidelines
X	N95 facepiece respirators	During LFM removal operations

During LFM removal operations, NIOSH-approved N95 particulate filtering facepiece respirators will be worn in accordance with GSI's or the respective contractor's Respiratory Protection Program. If particulate monitoring indicates that exposure to particulates is below the PELs, this requirement may be modified by the Site Safety Officer.

8.0 DECONTAMINATION PROTOCOL

Specify procedures for personnel decontamination and management of disposable PPE.

Personal Decontamination: Wash hands thoroughly before leaving the Site or eating. Disposable PPE (e.g. nitrile gloves) will be disposed in trash bags and disposed appropriately.

Equipment Decontamination: Disposable equipment (gloves, etc.) will be disposed appropriately. Removal equipment will be decontaminated by subcontractor, as needed. Reusable equipment will be decontaminated using a solution of laboratory-grade detergent (such as Alconox) and potable water and rinsed with potable water. Investigation derived waste (i.e., tubing, paper towels, etc.) will be placed in trash bags, and disposed according to state and local regulations. Additionally, visqueen or plastic sheeting will be laid down in the work area to help prevent cross decontamination and keep the work area clean.

Specify procedures for response to non-emergency chemical release.

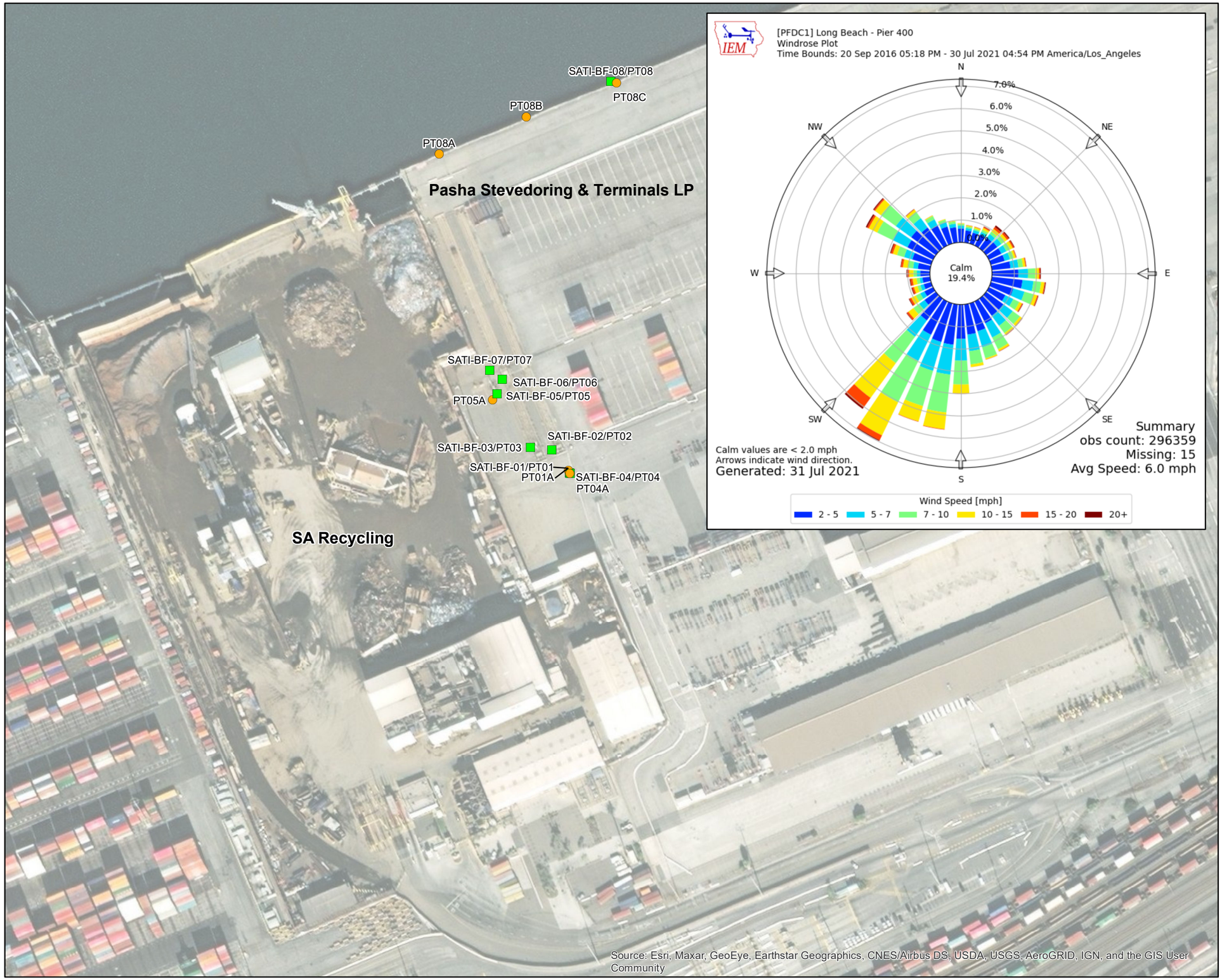
Although a non-emergency chemical release is not anticipated for this job, if one occurs, work will stop immediately, and the chemical will be cleaned up with rags or an appropriate absorbent material and disposed of in the IDW drum or separate drum as appropriate. Additionally, the SSO will contact the GSI Health & Safety Coordinator.

9.0 ADDITIONAL INFORMATION

Provide any additional information, procedures, or instructions as needed.

GSI will conduct a review of the site-specific Health and Safety Plan with subcontractors and other personnel on-Site before the project is started. The SSO will record items discussed on the Daily Site Safety Record (Attachment 1). As a means of tracking attendance, all site personnel are expected to review and sign the HASP. The SSO will track on-Site / off-Site times on the Daily Site Safety Record. After lunch each day, GSI will hold a brief meeting to discuss any safety issues encountered during the morning hours that needs to be addressed in the afternoon, and to refresh all field personnel on the safety issues associated with the project tasks.

At the conclusion of each workday, the SSO will complete the Daily Site Safety Record form (Attachment 1).



N

LEGEND

- Sample Location (GSI, October 6, 2021)
- Sample Location (DTSC, September 1, 2021)

Notes

1) Aerial imagery provided by Esri ArcGIS Online, November 2020.
2) Windrose plot downloaded from: https://mesonet.agron.iastate.edu/sites/windrose.phtml?station=PFDC1&network=CA_DCP, on October 14, 2021.

Feet
0 100 200

Projected Coordinate System
Datum: NAD 83
State Plane California Zone V
Units: Feet

GSI ENVIRONMENTAL

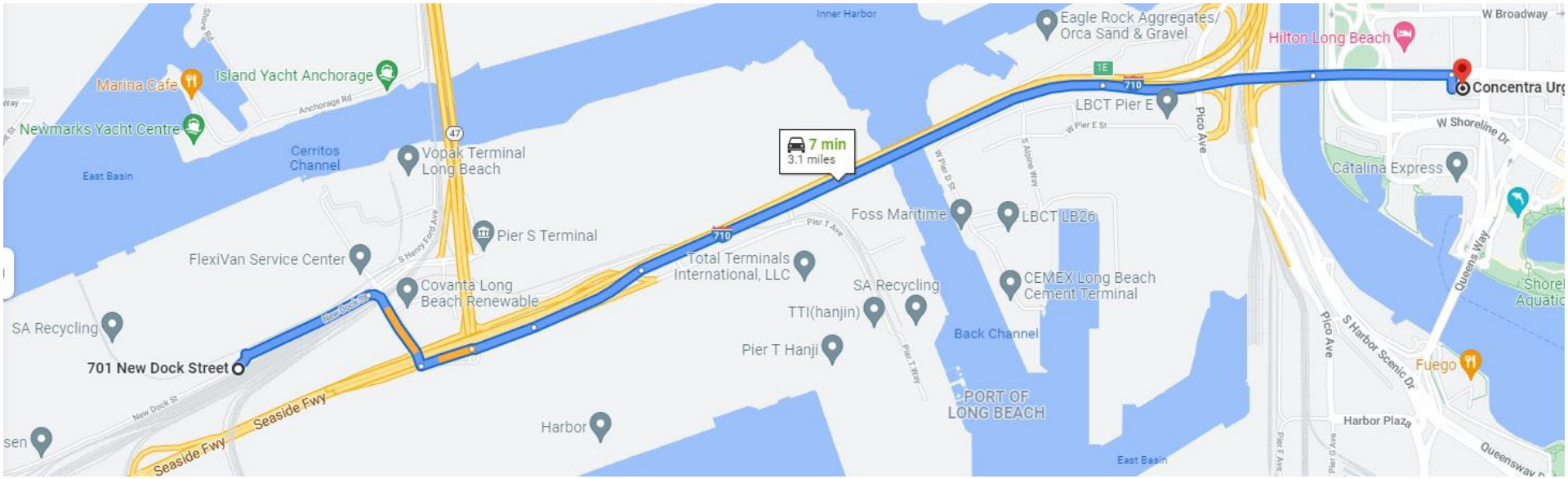
SAMPLE LOCATIONS & WIND SPEED AND DIRECTION

Pasha Stevedoring & Terminals LP
701 New Dock Street, San Pedro, California

GSI Job No.	6013	Drawn By:	AV
Issued:	14-Oct-2021	Chk'd By:	CH
Map ID:	SATI_SampLocsP400	Appv'd By:	TFW

FIGURE 1

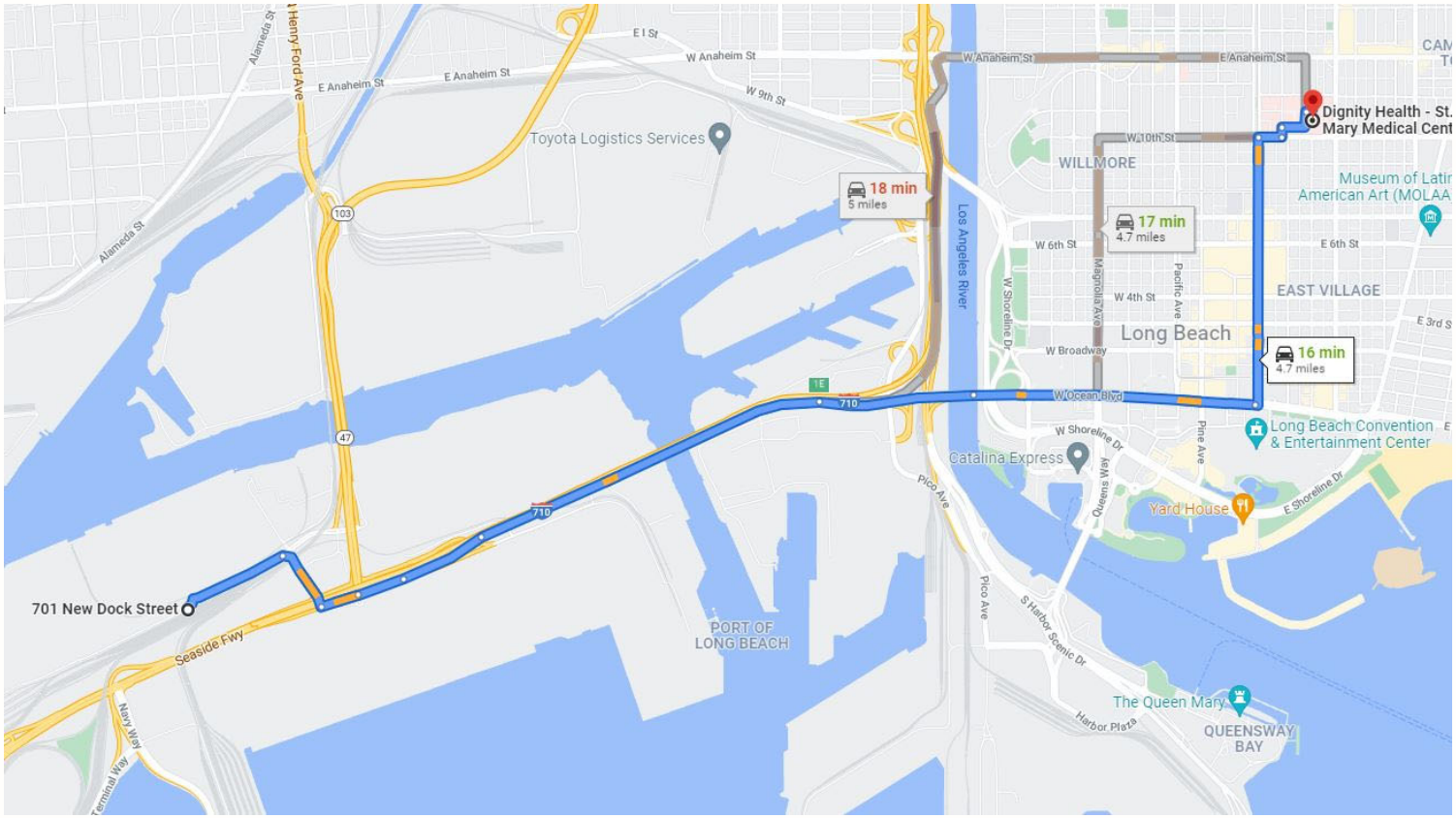
Collected via Google Maps:



1. Head east on New Dock St
2. Turn right onto Pier S Ave
3. Pier S Ave turns left and becomes CA-47 N
4. Use the 2nd from the right lane to take the ramp to I-710 N
5. Keep left at the fork and merge onto I-710 N
6. Take exit 1E toward Downtime
7. Continue on W Ocean Blvd
8. Turn right onto World Trade Center and the destination will be on the left.

GSI ENVIRONMENTAL	GSI Job No. 6013 Issued: 10/21/21 Revised: Scale: Not To Scale	Google.com/maps	FIGURE 2 URGENT CARE LOCATION MAP Concentra Urgent Care 100 Oceangate p245, Long Beach, CA 90802

Collected via Google Maps:



1. Head east on New Dock St
2. Turn right onto Pier S Ave
3. Pier S Ave turns left and becomes CA-47 N
4. Use the 2nd from the right lane to take the ramp to I-710 N
5. Keep left at the fork and merge onto I-710 N
6. Take exit 1E toward Downtime
7. Continue on W Ocean Blvd
8. Turn left onto Long Beach Blvd
9. Turn right onto E 10th St
10. Turn left onto Elm Ave
11. Turn right onto Linden Ave and the destination will be on the right.

GSI ENVIRONMENTAL	GSI Job No. 6013 Issued: 10/21/21 Revised: Scale: Not To Scale	Google.com/maps	FIGURE 3 HOSPITAL LOCATION MAP Dignity Health – St. Mary Medical Center 1050 Linden Ave, Long Beach, CA 90813

GSI ENVIRONMENTAL INC.

DAILY TAILGATE SAFETY MEETING

Project/Location: _____ GSI Job No._____

_____ Page 1 of 1

Site Safety Officer:_____ Date: _____

Meeting Conducted By: _____

Meeting Attended By:

NAME	COMPANY	SIGNATURE

_____Additional Personnel (See Next Page)

Tasks to be Performed:

Potential Hazards and Hazard Avoidance Measures:

Mechanical Hazards:

Heat Stress:

Chemical Exposure:

Biological Hazards:

Other:

GSI ENVIRONMENTAL INC.

DAILY SITE SAFETY RECORD

Project: _____ GSI Job No.: _____

Location: _____ Date: _____

Page 1 of _____

Field Personnel:

Name	Company	Time Onsite-Offsite	Time Onsite-Offsite
1)			
2)			
3)			
4)			
5)			

_____Additional Personnel (Attach additional sheets as needed.)

Work Item/Personal Protective Equipment Level:

Task: _____ PPE: _____

Task: _____ PPE: _____

Task: _____ PPE: _____

Air Quality Monitoring: _____ Required (See record on next page.) _____ Not Required

Safety Awareness Issues Discussed: _____

_____

_____

Site Safety Officer: _____ Confirmation: *"I have visually inspected the site for proper housekeeping, absence of slip or trip hazards, etc."*

Signature: _____ Date: _____

HEAVY EQUIPMENT USE (IF APPLICABLE)

Type of Equipment & Model: _____ Owned: _____ Rented: _____

Certification: *"I have been properly trained on the use of this equipment. I have inspected this equipment and confirmed it to be in good working condition."*

Signature: _____ Date: _____

ACCIDENTS/INJURIES/INCIDENTS

(Description of incident and actions taken. Attach additional sheets as needed.)

_____

_____

GSI ENVIRONMENTAL INC.

DAILY SITE SAFETY RECORD

GSI Job No._____
Page 2 of_____
Date _____

Air Quality Monitoring:

_____Photo Ionizing Detector (PID)
Calibration Check:
(95 ppm Methane Gas)

_____Other (Specify) _____
10 X Scale Reading (ppm)_____
100 X Scale Reading (ppm)_____

Time	Activity	Sample Point	Reading* (ppm)

* Reading above background, sustained for 1 minute period.

Action Level _____ ppm Action Level Exceeded?_____

Action Taken _____

Remarks _____

Centers for Disease Control and Prevention

Promoting productive workplaces through safety and health research NIOSH

Synonyms & Trade Names

Cadmium metal

CAS No.

7440-43-9 (metal)

RTECS No.

EU9800000 (metal)

DOT ID & Guide

2570 154(cadmium compound)

Formula

Cd (metal)

Conversion

IDLH

Ca [9 mg/m^3 (as Cd)]
See: 7440439

Exposure Limits

NIOSH REL
Ca See Appendix A [*Note: The REL applies to all Cadmium compounds (as Cd).]
OSHA PEL
[1910.1027] TWA 0.005 mg/m^3 [*Note: The PEL applies to all Cadmium compounds (as Cd).]

Measurement Methods

NIOSH 7048 , 7300 , 7301 , 7303 , 9102;
OSHA ID121 , ID125G , ID189 , ID206
See: NMAM or OSHA Methods

Physical Description

Metal: Silver-white, blue-tinged lustrous, odorless solid.

Molecular Weight	Boiling Point	Melting Point	Solubility	Vapor Pressure	Ionization Potential
112.4	1409°F	610°F	Insoluble	0 mmHg (approx)	NA

Specific Gravity	Flash Point	Upper Explosive Limit	Lower Explosive Limit		
8.65 (metal)	NA	NA	NA		

Metal: Noncombustible Solid in bulk form, but will burn in powder form.

Incompatibilities & Reactivities

Strong oxidizers; elemental sulfur, selenium & tellurium

Exposure Routes

inhalation, ingestion

Symptoms

pulmonary edema, dyspnea (breathing difficulty), cough, chest tightness, substernal (occurring beneath the sternum) pain; headache; chills, muscle aches; nausea, vomiting, diarrhea; anosmia (loss of the sense of smell), emphysema, proteinuria, mild anemia; [potential occupational carcinogen]

Target Organs

respiratory system, kidneys, prostate, blood

Cancer Site

[prostatic & lung cancer]

Personal Protection/Sanitation

(See protection codes)
Skin: No recommendation
Eyes: No recommendation
Wash skin: Daily
Remove: No recommendation
Change: Daily

First Aid

(See procedures)
Eye: Irrigate immediately
Skin: Soap wash
Breathing: Respiratory support
Swallow: Medical attention immediately

Respirator Recommendations

(See Appendix E)

NIOSH

At concentrations above the NIOSH REL, or where there is no REL, at any detectable concentration:
(APF = 10,000) Any self-contained breathing apparatus that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode
(APF = 10,000) Any supplied-air respirator that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary self-contained positive-pressure breathing apparatus

Escape:

(APF = 50) Any air-purifying, full-facepiece respirator with an N100, R100, or P100 filter.
Click here for information on selection of N, R, or P filters.

Any appropriate escape-type, self-contained breathing apparatus

Important additional information about respirator selection

See also

INTRODUCTION ICSC CARD: 0020 MEDICAL TESTS: 0035

Page last reviewed: October 30, 2019

Centers for Disease Control and Prevention

Promoting productive workplaces through safety and health research NIOSH

Synonyms & Trade Names

Lead metal, Plumbum

CAS No.

7439-92-1

RTECS No.

OF7525000

DOT ID & Guide

Formula

Pb

Conversion

IDLH

100 mg/m^3 (as Pb)
See: 7439921

Exposure Limits

NIOSH REL
TWA (8-hour) 0.050 mg/m^3 See Appendix C [*Note: The REL also applies to other lead compounds (as Pb) -- see Appendix C.]
OSHA PEL
[1910.1025] TWA 0.050 mg/m^3 See Appendix C [*Note: The PEL also applies to other lead compounds (as Pb) -- see Appendix C.]

Measurement Methods

NIOSH 7082 , 7105 , 7300 , 7301 , 7303 , 7700 , 7701 , 7702 , 9100 , 9102 , 9105;
OSHA ID206 , ID121 , ID125G
See: NMAM or OSHA Methods

Physical Description

A heavy, ductile, soft, gray solid.

Molecular Weight	Boiling Point	Melting Point	Solubility	Vapor Pressure	Ionization Potential
207.2	3164°F	621°F	Insoluble	0 mmHg (approx)	NA

Specific Gravity	Flash Point	Upper Explosive Limit	Lower Explosive Limit		
11.34	NA	NA	NA		

Noncombustible Solid in bulk form.

Incompatibilities & Reactivities

Strong oxidizers, hydrogen peroxide, acids

Exposure Routes

inhalation, ingestion, skin and/or eye contact

Symptoms

lassitude (weakness, exhaustion), insomnia; facial pallor; anorexia, weight loss, malnutrition; constipation, abdominal pain, colic; anemia; gingival lead line; tremor; paralysis wrist, ankles; encephalopathy; kidney disease; irritation eyes; hypertension

Target Organs

Eyes, gastrointestinal tract, central nervous system, kidneys, blood, gingival tissue

Personal Protection/Sanitation

(See protection codes)
Skin: Prevent skin contact
Eyes: Prevent eye contact
Wash skin: Daily
Remove: When wet or contaminated
Change: Daily

First Aid

(See procedures)
Eye: Irrigate immediately
Skin: Soap flush promptly
Breathing: Respiratory support
Swallow: Medical attention immediately

Respirator Recommendations

(See Appendix E)
NIOSH/OSHA

Up to 0.5 mg/m^3:
(APF = 10) Any air-purifying respirator with an N100, R100, or P100 filter (including N100, R100, and P100 filtering facepieces) except quarter-mask respirators.
Click here for information on selection of N, R, or P filters.
(APF = 10) Any supplied-air respirator

Up to 1.25 mg/m^3:
(APF = 25) Any supplied-air respirator operated in a continuous-flow mode
(APF = 25) Any powered, air-purifying respirator with a high-efficiency particulate filter.

Up to 2.5 mg/m^3:

(APF = 50) Any air-purifying, full-facepiece respirator with an N100, R100, or P100 filter.
Click here for information on selection of N, R, or P filters.

(APF = 50) Any supplied-air respirator that has a tight-fitting facepiece and is operated in a continuous-flow mode
(APF = 50) Any powered, air-purifying respirator with a tight-fitting facepiece and a high-efficiency particulate filter
(APF = 50) Any self-contained breathing apparatus with a full facepiece
(APF = 50) Any supplied-air respirator with a full facepiece

Up to 50 mg/m^3:
(APF = 1000) Any supplied-air respirator operated in a pressure-demand or other positive-pressure mode

Up to 100 mg/m^3:
(APF = 2000) Any supplied-air respirator that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode

pressure mode

Emergency or planned entry into unknown concentrations or IDLH conditions:
(APF = 10,000) Any self-contained breathing apparatus that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode
(APF = 10,000) Any supplied-air respirator that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary self-contained positive-pressure breathing apparatus

Escape:

(APF = 50) Any air-purifying, full-facepiece respirator with an N100, R100, or P100 filter.
Click here for information on selection of N, R, or P filters.

Any appropriate escape-type, self-contained breathing apparatus

Important additional information about respirator selection

See also

INTRODUCTION ICSC CARD: 0052 MEDICAL TESTS: 0127

Page last reviewed: October 30, 2019

Centers for Disease Control and Prevention

Promoting productive workplaces through safety and health research NIOSH

Synonyms & Trade Names

Zinc peroxide

CAS No.

1314-13-2

RTECS No.

ZH4810000

DOT ID & Guide

1516 143

Formula

ZnO

Conversion

IDLH

500 mg/m^3
See: 1314132

Exposure Limits

NIOSH REL
Dust: TWA 5 mg/m^3 C 15 mg/m^3
Fume: TWA 5 mg/m^3 ST 10 mg/m^3
OSHA PEL
TWA 5 mg/m^3 (fume) TWA 15 mg/m^3 (total dust) TWA 5 mg/m^3 (resp dust) See Appendix G

Measurement Methods

NIOSH 7303 , 7502;
OSHA ID121 , ID143
See: NMAM or OSHA Methods

Physical Description

White, odorless solid.

Molecular Weight	Boiling Point	Melting Point	Solubility	Vapor Pressure	Ionization Potential
81.4	?	3587°F	(64°F): 0.0004%	0 mmHg (approx)	NA

Specific Gravity	Flash Point	Upper Explosive Limit	Lower Explosive Limit		
5.61	NA	NA	NA		

Noncombustible Solid

Incompatibilities & Reactivities

Chlorinated rubber (at 419°F), water [Note: Slowly decomposed by water.]

Exposure Routes

inhalation

Symptoms

Metal fume fever: chills, muscle ache, nausea, fever, dry throat, cough; lassitude (weakness, exhaustion); metallic taste; headache; blurred vision; low back pain; vomiting; malaise (vague feeling of discomfort); chest tightness; dyspnea (breathing difficulty), rales, decreased pulmonary function

Target Organs

respiratory system

Personal Protection/Sanitation

(See protection codes)
Skin: No recommendation
Eyes: No recommendation
Wash skin: No recommendation
Remove: No recommendation
Change: No recommendation

First Aid

(See procedures)

Breathing: Respiratory support

Respirator Recommendations

NIOSH/OSHA

Up to 50 mg/m^3:
(APF = 10) Any particulate respirator equipped with an N95, R95, or P95 filter (including N95, R95, and P95 filtering facepieces) except quarter-mask respirators. The following filters may also be used: N99, R99, P99, N100, R100, P100.
Click here for information on selection of N, R, or P filters.
(APF = 10) Any supplied-air respirator

Up to 125 mg/m^3:
(APF = 25) Any supplied-air respirator operated in a continuous-flow mode
(APF = 25) Any powered, air-purifying respirator with a high-efficiency particulate filter.

Up to 250 mg/m^3:

(APF = 50) Any air-purifying, full-facepiece respirator with an N100, R100, or P100 filter.
Click here for information on selection of N, R, or P filters.

(APF = 50) Any supplied-air respirator that has a tight-fitting facepiece and is operated in a continuous-flow mode
(APF = 50) Any powered, air-purifying respirator with a tight-fitting facepiece and a high-efficiency particulate filter
(APF = 50) Any self-contained breathing apparatus with a full facepiece
(APF = 50) Any supplied-air respirator with a full facepiece

Up to 500 mg/m^3:
(APF = 1000) Any supplied-air respirator operated in a pressure-demand or other positive-pressure mode

Emergency or planned entry into unknown concentrations or IDLH conditions:
(APF = 10,000) Any self-contained breathing apparatus that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode
(APF = 10,000) Any supplied-air respirator that has a full facepiece and is operated in a pressure-demand or other

(APF = 10,000) Any supplied-air respirator that has a full facepiece and is operated in a pressure demand or other positive-pressure mode in combination with an auxiliary self-contained positive-pressure breathing apparatus

Escape:

(APF = 50) Any air-purifying, full-facepiece respirator with an N100, R100, or P100 filter.
Click here for information on selection of N, R, or P filters.

Any appropriate escape-type, self-contained breathing apparatus

Important additional information about respirator selection

See also

INTRODUCTION ICSC CARD: 0208 MEDICAL TESTS: 0246

Page last reviewed: October 30, 2019

Centers for Disease Control and Prevention

The National Institute for Occupational Safety and Health (NIOSH)

Promoting productive workplaces through safety and health research

Synonyms & Trade Names

Aroclor® 1242, PCB [Chlorodiphenyl (42% chlorine)], Polychlorinated biphenyl [Chlorodiphenyl (42% chlorine)]

CAS No.

53469-21-9

RTECS No.

TQ1356000

DOT ID & Guide

2315 171

Formula

$C_6H_4ClC_6H_3Cl_2$ (approx)

Conversion

IDLH

Ca [5 mg/m^3]
See: 53469219

Exposure Limits

NIOSH REL
Ca TWA 0.001 mg/m^3 See Appendix A [*Note: The REL also applies to other PCBs.]
OSHA PEL
TWA 1 mg/m^3 [skin]

Measurement Methods

NIOSH 5503;
OSHA PV2089
See: NMAM or OSHA Methods

Physical Description

Colorless to light-colored, viscous liquid with a mild, hydrocarbon odor.

Molecular Weight	Boiling Point	Freezing Point	Solubility	Vapor Pressure	Ionization Potential
258 (approx)	617-691°F	-2°F	Insoluble	0.001 mmHg	?

Specific Gravity	Flash Point	Upper Explosive Limit	Lower Explosive Limit		
(77°F): 1.39	NA	NA	NA		

Nonflammable Liquid, but exposure in a fire results in the formation of a black soot containing PCBs, polychlorinated dibenzofurans & chlorinated dibenzo-p-dioxins.

Incompatibilities & Reactivities

Strong oxidizers

Exposure Routes

inhalation, skin absorption, ingestion, skin and/or eye contact

Symptoms

irritation eyes; chloracne; liver damage; reproductive effects; [potential occupational carcinogen]

Target Organs

Skin, eyes, liver, reproductive system

Cancer Site

[in animals: tumors of the pituitary gland & liver, leukemia]

Personal Protection/Sanitation

(See protection codes)
Skin: Prevent skin contact
Eyes: Prevent eye contact
Wash skin: When contaminated
Remove: When wet or contaminated
Change: Daily
Provide: Eyewash, Quick drench

First Aid

(See procedures)
Eye: Irrigate immediately
Skin: Soap wash immediately
Breathing: Respiratory support
Swallow: Medical attention immediately

Respirator Recommendations

NIOSH

At concentrations above the NIOSH REL, or where there is no REL, at any detectable concentration:
(APF = 10,000) Any self-contained breathing apparatus that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode
(APF = 10,000) Any supplied-air respirator that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary self-contained positive-pressure breathing apparatus

Escape:
(APF = 50) Any air-purifying, full-facepiece respirator (gas mask) with a chin-style, front- or back-mounted organic vapor canister having an N100, R100, or P100 filter.
Click here for information on selection of N, R, or P filters.
Any appropriate escape-type, self-contained breathing apparatus

Important additional information about respirator selection

See also

INTRODUCTION MEDICAL TESTS: 0175

Page last reviewed: October 30, 2019

Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), 29CFR1910/1200 and GHS Rev. 3

Effective date: 05/17/2017 **Revision** : 05/17/2017

Trade Name: Liquinox

1 Identification of the substance/mixture and of the supplier

1.1 Product identifier

Trade Name: Liquinox
Synonyms:
Product number: 1232-1, 1232, 1201-1, 1201, 1205, 1215, 1255

1.2 Application of the substance / the mixture : Cleaning material/Detergent

1.3 Details of the supplier of the Safety Data Sheet

Manufacturer **Supplier**
Alconox, Inc.
30 Glenn Street
White Plains, NY 10603
1-914-948-4040

Emergency telephone number:
ChemTel Inc
North America: 1-800-255-3924
International: 01-813-248-0585

2 Hazards identification

2.1 Classification of the substance or mixture:

In compliance with EC regulation No. 1272/2008, 29CFR1910/1200 and GHS Rev. 3 and amendments.

Hazard-determining components of labeling:
Alcohol ethoxylate
Sodium alkylbenzene sulfonate
Sodium xylenesulphonate
Lauramine oxide

2.2 Label elements:

Eye irritation, category 2A.
Skin irritation, category 2.

Hazard pictograms:

Signal word: Warning

Hazard statements:
H315 Causes skin irritation.
H319 Causes serious eye irritation.

Precautionary statements:
P264 Wash skin thoroughly after handling.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P302+P352 If on skin: Wash with soap and water.
P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
P332+P313 If skin irritation occurs: Get medical advice/attention.
P501 Dispose of contents and container as instructed in Section 13.

Additional information: None.

Hazard description

Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), 29CFR1910/1200 and GHS Rev. 3

Effective date: 05/17/2017 **Revision** : 05/17/2017

Trade Name: Liquinox

Hazards Not Otherwise Classified (HNOC): None

Information concerning particular hazards for humans and environment:

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

Classification system:

The classification is according to EC regulation No. 1272/2008, 29CFR1910/1200 and GHS Rev. 3 and amendments, and extended by company and literature data. The classification is in accordance with the latest editions of international substances lists, and is supplemented by information from technical literature and by information provided by the company.

3 Composition/information on ingredients

3.1 Chemical characterization : None

3.2 Description : None

3.3 Hazardous components (percentages by weight)

Identification	Chemical Name	Classification	Wt. %
CAS number: 68081-81-2	Sodium Alkylbenzene Sulfonate	Acute Tox. 4; H303 Skin Irrit. 2 ; H315 Eye Irrit. 2; H319	10-25
CAS number: 1300-72-7	Sodium Xylenesulphonate	Eye Irrit. 2; H319	2.5-10
CAS number: 84133-50-6	Alcohol Ethoxylate	Skin Irrit. 2 ; H315 Eye Dam. 1; H318	2.5-10
CAS number: 1643-20-5	Lauramine oxide	Skin Irrit. 2 ; H315 Eye Dam. 1; H318	1-2

3.4 Additional Information: None.

4 First aid measures

4.1 Description of first aid measures

General information: None.

After inhalation:

Maintain an unobstructed airway.

Loosen clothing as necessary and position individual in a comfortable position.

After skin contact:

Wash affected area with soap and water.

Seek medical attention if symptoms develop or persist.

After eye contact:

Rinse/flush exposed eye(s) gently using water for 15-20 minutes.

Remove contact lens(es) if able to do so during rinsing.

Seek medical attention if irritation persists or if concerned.

After swallowing:

Rinse mouth thoroughly.

Seek medical attention if irritation, discomfort, or vomiting persists.

4.2 Most important symptoms and effects, both acute and delayed

None

Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), 29CFR1910/1200 and GHS Rev. 3

Effective date: 05/17/2017 **Revision** : 05/17/2017

Trade Name: Liquinox

4.3 Indication of any immediate medical attention and special treatment needed:

No additional information.

5 Firefighting measures

5.1 Extinguishing media

Suitable extinguishing agents:

Use appropriate fire suppression agents for adjacent combustible materials or sources of ignition.

For safety reasons unsuitable extinguishing agents : None

5.2 Special hazards arising from the substance or mixture :

Thermal decomposition can lead to release of irritating gases and vapors.

5.3 Advice for firefighters

Protective equipment:

Wear protective eye wear, gloves and clothing.
Refer to Section 8.

5.4 Additional information :

Avoid inhaling gases, fumes, dust, mist, vapor and aerosols.
Avoid contact with skin, eyes and clothing.

6 Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures :

Ensure adequate ventilation.
Ensure air handling systems are operational.

6.2 Environmental precautions :

Should not be released into the environment.
Prevent from reaching drains, sewer or waterway.

6.3 Methods and material for containment and cleaning up :

Wear protective eye wear, gloves and clothing.

6.4 Reference to other sections : None

7 Handling and storage

7.1 Precautions for safe handling :

Avoid breathing mist or vapor.
Do not eat, drink, smoke or use personal products when handling chemical substances.
Conditions for safe storage, including any incompatibilities:
Store closed upright and in a cool dry place, should be 15 - 30 deg C or 60 - 90 deg F.

7.2 Specific end use(s):

No additional information.

Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), 29CFR1910/1200 and GHS Rev. 3

Effective date: 05/17/2017 **Revision** : 05/17/2017

Trade Name: Liquinox

8 Exposure controls/personal protection

8.1 Control parameters :

No applicable occupational exposure limits

8.2 Exposure controls

Appropriate engineering controls:

Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use or handling.

Respiratory protection:

Not needed under normal conditions.

Protection of skin:

Select glove material impermeable and resistant to the substance.

Eye protection:

Safety goggles or glasses, or appropriate eye protection.

General hygienic measures:

Wash hands before breaks and at the end of work.
Avoid contact with skin, eyes and clothing.

9 Physical and chemical properties

Appearance (physical state, color):	Pale yellow liquid	**Explosion limit lower:** **Explosion limit upper:**	Not determined or not available. Not determined or not available.
Odor:	Not determined or not available.	**Vapor pressure at 20°C:**	Not determined or not available.
Odor threshold:	Not determined or not available.	**Vapor density:**	Not determined or not available.
pH-value:	8.5 as is	**Relative density:**	Not determined or not available.
Melting/Freezing point:	Not determined or not available.	**Solubilities:**	Not determined or not available.
Boiling point/Boiling range:	Not determined or not available.	**Partition coefficient (n-octanol/water):**	Not determined or not available.
Flash point (closed cup):	Not determined or not available.	**Auto/Self-ignition temperature:**	Not determined or not available.
Evaporation rate:	Not determined or not available.	**Decomposition temperature:**	Not determined or not available.
Flammability (solid, gaseous):	Not determined or not available.	**Viscosity:**	a. Kinematic: Not determined or not available. b. Dynamic: Not determined or not available.

Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), 29CFR1910/1200 and GHS Rev. 3

Effective date: 05/17/2017 **Revision** : 05/17/2017

Trade Name: Liquinox	
Density at 20°C:	Not determined or not available.

10 Stability and reactivity

10.1 Reactivity : None

10.2 Chemical stability : None

10.3 Possibility hazardous reactions : None

10.4 Conditions to avoid : None

10.5 Incompatible materials : None

10.6 Hazardous decomposition products : None

11 Toxicological information

11.1 Information on toxicological effects :

Acute Toxicity:

Oral:

: LD50 >5000 mg per kg Rat, Oral) - product .

Chronic Toxicity: No additional information.

Skin corrosion/irritation:

Alcohol Ethoxylate: May cause mild to moderate skin irritation.

Sodium Alkylbenzene Sulfonate: Causes skin irritation.

Lauramine oxide: Causes skin irritation.

Serious eye damage/irritation:

Sodium Alkylbenzene Sulfonate: Causes serious eye irritation.

Alcohol Ethoxylate: Causes moderate to severe eye irritation and conjunctivitis.

Sodium xylenesulphonate: Rabbit: irritating to eyes.

Lauramine oxide: Causes serious eye damage.

Respiratory or skin sensitization: No additional information.

Carcinogenicity: No additional information.

IARC (International Agency for Research on Cancer): None of the ingredients are listed.

NTP (National Toxicology Program): None of the ingredients are listed.

Germ cell mutagenicity: No additional information.

Reproductive toxicity: No additional information.

STOT-single and repeated exposure: No additional information.

Additional toxicological information: No additional information.

12 Ecological information

12.1 Toxicity:

Sodium Alkylbenzene Sulfonate: Fish, LC50 1.67 mg/l, 96 hours.

Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), 29CFR1910/1200 and GHS Rev. 3

Effective date: 05/17/2017 **Revision** : 05/17/2017

Trade Name: Liquinox

Sodium Alkylbenzene Sulfonate: Aquatic invertebrates, EC50 Daphnia 2.4 mg/l, 48 hours.
Sodium Alkylbenzene Sulfonate: Aquatic Plants, EC50 Algae 29 mg/l, 96 hours.
Lauramine oxide: Fish, LC0 24.3 mg/l, 96h [Killifish (Cyprinodontidae)]
Lauramine oxide: Aquatic invertebrates, (LC50): 3.6 mg/l 96 hours [Daphnia (Daphnia)].
Lauramine oxide: Aquatic plants, EC50 Algae 0.31 mg/l 72 hours [Algae]
Alcohol Ethoxylate: Aquatic invertebrates, (LC50): 4.01 mg/l 48 hours [Daphnia (daphnia)].

12.2 Persistence and degradability: No additional information.

12.3 Bioaccumulative potential: No additional information.

12.4 Mobility in soil: No additional information.

General notes: No additional information.

12.5 Results of PBT and vPvB assessment:

PBT: No additional information.

vPvB: No additional information.

12.6 Other adverse effects: No additional information.

13 Disposal considerations

13.1 Waste treatment methods (consult local, regional and national authorities for proper disposal)

Relevant Information:

It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities. (US 40CFR262.11).

14 Transport information

14.1 UN Number: ADR, ADN, DOT, IMDG, IATA	None
14.2 UN Proper shipping name: ADR, ADN, DOT, IMDG, IATA	None
14.3 Transport hazard classes: ADR, ADN, DOT, IMDG, IATA	**Class:** None **Label:** None **LTD. QTY:** None

US DOT

Limited Quantity Exception: None

Bulk:
RQ (if applicable): None
Proper shipping Name: None
Hazard Class: None
Packing Group: None
Marine Pollutant (if applicable): No additional information.
Comments: None

Non Bulk:
RQ (if applicable): None
Proper shipping Name: None
Hazard Class: None
Packing Group: None
Marine Pollutant (if applicable): No additional information.
Comments: None

Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), 29CFR1910/1200 and GHS Rev. 3

Effective date: 05/17/2017 **Revision** : 05/17/2017

Trade Name: Liquinox

14.4 Packing group: ADR, ADN, DOT, IMDG, IATA	None
14.5 Environmental hazards :	None
14.6 Special precautions for user:	None
Danger code (Kemler):	None
EMS number:	None
Segregation groups:	None

14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code: Not applicable.

14.8 Transport/Additional information:

Transport category:	None
Tunnel restriction code:	None
UN "Model Regulation":	None

15 Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture.

North American

SARA

Section 313 (specific toxic chemical listings): None of the ingredients are listed.
Section 302 (extremely hazardous substances): None of the ingredients are listed.

CERCLA (Comprehensive Environmental Response, Clean up and Liability Act) Reportable

Spill Quantity: None of the ingredients are listed.

TSCA (Toxic Substances Control Act):

Inventory: All ingredients are listed.
Rules and Orders: Not applicable.

Proposition 65 (California):

Chemicals known to cause cancer: None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for females: None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for males: None of the ingredients are listed.

Chemicals known to cause developmental toxicity: None of the ingredients are listed.

Canadian

Canadian Domestic Substances List (DSL):
All ingredients are listed.

EU

REACH Article 57 (SVHC): None of the ingredients are listed.

Germany MAK: Not classified.

Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), 29CFR1910/1200 and GHS Rev. 3

Effective date: 05/17/2017 **Revision** : 05/17/2017

Trade Name: Liquinox

Asia Pacific

Australia

Australian Inventory of Chemical Substances (AICS): All ingredients are listed.

China

Inventory of Existing Chemical Substances in China (IECSC): All ingredients are listed.

Japan

Inventory of Existing and New Chemical Substances (ENCS): All ingredients are listed.

Korea

Existing Chemicals List (ECL): All ingredients are listed.

New Zealand

New Zealand Inventory of Chemicals (NZOIC): All ingredients are listed.

Philippines

Philippine Inventory of Chemicals and Chemical Substances (PICCS): All ingredients are listed.

Taiwan

Taiwan Chemical Substance Inventory (TSCI): All ingredients are listed.

16 Other information

Abbreviations and Acronyms: None

Summary of Phrases

Hazard statements:

H315 Causes skin irritation.
H319 Causes serious eye irritation.

Precautionary statements:

P264 Wash skin thoroughly after handling.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P302+P352 If on skin: Wash with soap and water.
P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
P332+P313 If skin irritation occurs: Get medical advice/attention.
P501 Dispose of contents and container as instructed in Section 13.

Manufacturer Statement:

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

NFPA: 1-0-0

HMIS: 1-0-0

ATTACHMENT H
EMPLOYEE PROCEDURES HANDBOOK ADDENDUM:

GSI PANDEMIC DISEASE PLAN

Potential Hazards and Mitigation Measures

This GSI Environmental Inc. (GSI) Employee Procedures Handbook (EPH) Addendum (Addendum) outlines the potential hazards and safety measures related to pandemics, in particular the Coronavirus Disease 2019 (COVID-19), that all GSI employees should understand and implement when completing work-related activities and as general precautions for all staff during pandemic outbreaks. This Addendum also outlines additional health and safety precautions as a supplement to the general health and safety procedures outlined in the GSI Environment, Health, and Safety (EHS) Program Manual and Procedures Handbook. This Addendum is written to guide GSI employees in implementing essential work-related tasks, such as field operations, in accordance with Occupational Safety and Health Administration (OSHA) *Guidance on Preparing Workplaces for COVID-19* (OSHA COVID-19 Guidance).[1]

1.0 SCOPE OF THIS ADDENDUM

Many cities, counties, and states may implement 'stay-at-home' orders during a pandemic outbreak, such as during the COVID-19 outbreak.[2,3,4] In addition, certain orders (such as the State of California and Harris County, Texas) under the guidance of the Department of Homeland Security may deem certain job sectors' infrastructure workers as essential, including environmental remediation and monitoring under the energy sector and environmental protection and remediation under the water and wastewater sector.[5,6,7,8] Many GSI projects fall under these or other essential job sectors required to continue business operations during the COVID-19 outbreak. Several regulatory agencies have indicated that their oversight, including field work, are essential activities for protection of human health and the environment and will continue under COVID-19 protocols.[8,9]

It is important to be aware of, and implement, best practices for personal protection to mitigate potential transmission of diseases during a pandemic. This Addendum specifically describes potential health hazards and mitigation measures associated with COVID-19, in accordance with the guidance of the OSHA *Guidance on Preparing Workplaces for COVID-19*.[10] Safe practices for the reopening of GSI offices are discussed under separate cover and included as Attachment 1 to this Addendum (*GSI Plan for Return to Office Memorandum*).[11] However, the mitigation measures described herein should be practiced during any future pandemic outbreaks. It is important to note that the information on diseases during a pandemic outbreak, such as COVID-19, is evolving and procedures described in this Addendum may be updated based on the best available information at that time.

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[1] https://www.osha.gov/Publications/OSHA3990.pdf
[2] https://covid19.ca.gov/img/Executive-Order-N-33-20.pdf
[3] fhttps://www.readyharris.org/Stay-Home
[4] http://www.austintexas.gov/edims/document.cfm?id=337824
[5] https://www.cisa.gov/sites/default/files/publications/CISA-Guidance-on-Essential-Critical-Infrastructure-Workers-1-20-508c.pdf
[6] https://www.cisa.gov/sites/default/files/publications/CISA_Guidance_on_the_Essential_Critical_Infrastructure_Workforce_Version_2.0_Updated.pdf
[7] https://covid19.ca.gov/img/EssentialCriticalInfrastructureWorkers.pdf
[8] https://www.waterboards.ca.gov/resources/covid-19_updates/
[9] LinkedIn notification by Brownfield Development Manager, Cypress Division, Cal-EPA DTSC, 24 March 2020.
[10] See note 1.
[11] GSI Environmental Inc. (GSI), 2021. GSI Plan for Return to Office Memorandum. 4 January 2021.

2.0 WHAT IS COVID-19

COVID-19 is a respiratory disease caused by the novel SARS-CoV-2 virus; a strain of coronavirus discovered in 2019. Coronaviruses (CoV) are a large family of viruses that cause illness ranging from the common cold to more severe diseases such as Middle East Respiratory Syndrome (MERS-CoV) and Severe Acute Respiratory Syndrome (SARS-CoV).[12]

Coronaviruses are transmitted between animals and humans (i.e., zoonotic) and affect the respiratory system in humans. Common signs of infection include respiratory symptoms, fever, cough, shortness of breath and breathing difficulties. In more severe cases, infection can cause pneumonia, severe acute respiratory syndrome, kidney failure and even death.

Infection with SARS-CoV-2, the virus that causes COVID-19, can cause illness ranging from mild to severe. In some cases, infection can be fatal. As listed above, symptoms typically include fever, cough, and shortness of breath. Some people infected with the virus have reported experiencing other non-respiratory symptoms. Other people, referred to as asymptomatic cases, have experienced no symptoms at all.[13] According to the Centers for Disease Control and Prevention (CDC), symptoms of COVID-19 may appear in as few as 2 days or as long as 14 days after exposure.[14]

3.0 COVID-19 SYMPTOMS AND TRANSMISSION

The COVID-19 virus affects people in different ways. COVID-19 is a respiratory disease and most infected people will develop mild to moderate symptoms and recover without requiring special treatment. People who have underlying medical conditions and those over 60 years old have a higher risk of developing severe symptoms and potentially death.

Common symptoms include:

- fever
- tiredness
- dry cough
- loss of the sense of taste or smell

Other symptoms may include:

- shortness of breath
- aches and pains
- sore throat
- and very few people will report diarrhea, nausea or a runny nose[15]

Symptoms generally appear within 2 to 14 days. COVID-19 is mainly spread from person-to-person through the following pathways:

- Between people in close contact (within about 6 feet); and

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[12] https://www.who.int/health-topics/coronavirus
[13] See note 1.
[14] https://www.cdc.gov/coronavirus/2019-ncov/symptoms-testing/symptoms.html
[15] https://www.who.int/health-topics/coronavirus#tab=tab_3

- Through respiratory droplets produced when an infected person coughs or sneezes. These droplets can land in the mouths or noses, or possibly inhaled into the lungs of people in close proximity.[16]

COVID-19 may also be transmitted by touching a surface or object that has the virus on it followed by touching one's own mouth, nose, or eyes. However, this is not thought to be the primary way the virus spreads. People are most contagious when they are most symptomatic (i.e., experiencing fever, cough, and/or shortness of breath). Some spread might be possible before people show symptoms; there have been reports of this type of asymptomatic transmission with this new coronavirus, but this is also not thought to be the main way the virus spreads. Although the United States has implemented public health measures to limit the spread of the virus, it is likely that some person-to-person transmission will continue to occur. The CDC website provides the latest information about COVID-19 transmission: www.cdc.gov/coronavirus/2019-ncov/about/transmission.html.

4.0 PREVENTION AND MITIGATION MEASURES

During pandemic outbreaks, all GSI employees who would like to work from home regardless of their position may be given the opportunity to do so. Consideration of individual family circumstances and protective health measures must be made by each employee. It is GSI's current policy that all employees follow CDC guidelines and other state and/or county orders related to pandemic outbreaks, such as the COVID-19 pandemic, including guidelines discussed in the OSHA COVID-19 Guidance and the California Division of Occupational Safety and Health (Cal/OSHA) guidance.[17,18] Furthermore, GSI encourages employees to consult with their primary care physician and consider immunization guidelines of the CDC and/or local health departments to obtain appropriate immunizations when vaccines become available. [19] Additional guidelines for mitigation measures while working in the GSI offices, including procedures for disinfecting surfaces and safety measures while completing work at the offices, are described in the *GSI Plan for Return to Work Memorandum* and included as Attachment 1 to this Addendum.

GSI will continue to provide its services as a member of the Essential Critical Infrastructure Workforce, which may include some GSI employees performing fieldwork during a pandemic outbreak. Therefore, certain additional health and safety measures to prevent the transmission and spread of diseases, as described herein, should be followed.

Engineering Controls

Below is a description of potential engineering controls that should be implemented as appropriate.

Utilize Plastic on Surfaces and/or Disinfect Surfaces

Put plastic sheeting on surfaces where field staff will be eating or drinking and change plastic out as necessary to prevent the spread of the disease. If plastic is not available, clean and disinfect surfaces prior to and after use.

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[16] https://www.cdc.gov/coronavirus/2019-ncov/prepare/transmission.html?CDC_AA_refVal=https%3A%2F%2Fwww.cdc.gov%2Fcoronavirus%2F2019-ncov%2Fabout%2Ftransmission.html
[17] https://www.dir.ca.gov/dosh/coronavirus/General-Industry.html
[18] https://www.osha.gov/Publications/OSHA3990.pdf
[19] https://www.cdc.gov/coronavirus/2019-ncov/vaccines/recommendations.html

Additionally, all frequently touched surfaces such as tables, car doors, light switches, countertops, handles, phones, keyboards, toilets, faucets, and sinks should be disinfected at least daily, preferably several times a day. If surfaces are dirty, clean them by using detergent or soap and water prior to disinfection.

Disinfectants that can be used include a bleach solution (1/3 cup to 1 gallon of water) or the other disinfectants suggested by the United States Environmental Protection Agency (USEPA) in List N: Disinfectants for Use Against SARS-CoV-2 (https://www.epa.gov/pesticide-registration/list-n-disinfectants-use-against-sars-cov-2).

Increase Ventilation

Increase ventilation where applicable by completing work outside instead of inside.

Administrative Controls

Below is a description of administrative controls that should be implemented as appropriate.

Stay at Home if You Are Sick

First and foremost, if you are sick, stay home. Do not perform fieldwork if you are sick. If you wake up sick prior to fieldwork, inform the Project Team Leader (PTL) who will subsequently schedule another staff member or reschedule the work. During the pandemic outbreak, it is GSI's policy to remain at home and follow CDC-recommended social isolation and/or self-quarantine protocols if you are sick or think that you may have contracted the disease.

Avoid Sharing Personal Items

In general, it is never a good idea to share personal items, but particularly not during a pandemic outbreak. It is important that you do not share coffee cups, water bottles, or any other personal items. Label your disposable water bottles with your initials to prevent others from mistaking your water bottles for their own.

Maintain a Safe Distance from Others (6-foot Rule)

As a general safety practice during a pandemic outbreak and to the extent practical, try to maintain a safe distance (i.e., 6 feet) from other field personnel and subcontractors while performing fieldwork. Do not shake hands, hug, or perform any other greeting with physical contact. Other ideas for greetings are waves or verbal greetings.

Wash Your Hands

Wash your hands often with soap and warm water for at least 20 seconds, especially after you have been in a public place, or after blowing your nose, coughing, or sneezing. If soap and water are not readily available, use company-supplied hand sanitizer that contains at least 60% alcohol. Cover all surfaces of your hands and rub them together until they feel dry. Avoid touching your eyes, nose, and mouth with unwashed hands. Use chemical-resistant gloves whenever possible.

Cover Coughs and Sneezes

Cover your mouth and nose with a tissue when you cough or sneeze or use the inside of your elbow. Throw any used tissues in the trash and immediately wash your hands with soap and water for at least 20 seconds. If soap and water are not readily available, clean your hands with a hand sanitizer that contains at least 60% alcohol.

Travel to and From Job Sites

Travel to and from job sites to implement essential field activities will follow local, state, and federal guidance and regulations. Decisions on travel (e.g., number of staff per vehicle and type of travel) will remain up to the project team and be discussed between field staff, PTL, and the principal in charge (PIC). Travel arrangements should be specified in the Site-Specific Health and Safety Plan (SS-HASP). Generally, to avoid other potential hazards (particularly on longer travel in vehicles), it may be acceptable to have more than one staff member in a vehicle at a time. However, social distancing procedures (such as rolling down windows and maintaining safe distances) should be implemented as possible.

Client- and/or site-specific travel requirements at host facilities at which GSI projects are being conducted may also apply. In some cases, these requirements may differ from GSI's standard policy. In such cases, the more protective standard will apply.

Personal Protective Equipment (PPE)

Below is a description of personal protective equipment (PPE) that may be used to help prevent the spread of diseases. All PPE should be inspected prior to using as specified in the GSI EHS Program Manual.

Face Coverings

The CDC and many counties and cities recommend and/or require the use of cloth face coverings or medical masks in public settings where other social distancing measures are difficult to maintain (e.g., grocery stores and pharmacies), especially in areas of significant community-based transmission.[20,21,22,23] In addition, some cities have issued orders requiring both employees and patrons to wear face coverings, such as scarves, bandanas, neck gaiters, or other fabric coverings or medical masks at essential businesses that provide retail goods, food, banking, and commercial services.[24] [25]

GSI personnel should carry clean cloth face coverings or medical masks when working outside of their home to ensure they are prepared to follow regional requirements for face coverings when visiting essential businesses, such as gas stations, grocery stores, or other retail, commercial, or public settings.

The use of cloth face coverings or medical masks compliments and does not replace other disease mitigation and prevention guidelines, such as for COVID-19.[26] It is important to follow other procedures described herein in conjunction with the use of face coverings, such as those described below including: washing your hands or using hand sanitizer and avoiding touching your eyes, nose, and mouth with unwashed hands.

The use of cloth face coverings or medical masks also does not replace or complement the use of respiratory protection personal PPE, as needed based on site-specific conditions, as described below.

The CDC has issued guidance and do-it-yourself instructions on making sewn and unsewn masks from cloth (such as T-shirt material), which are available on its website.[27]

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[20] https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/cloth-face-cover.html
[21] https://1ccaxf2hhhbh1jcwiktlicz7-wpengine.netdna-ssl.com/wp-content/uploads/2020/04/EOC-Press-Release-36-Masks.pdf
[22] https://occovid19.ochealthinfo.com/article/oc-health-officers-orders-recommendations
[23] https://www.cdph.ca.gov/Programs/OPA/Pages/NR20-128.aspx
[24] http://legacy.cityofirvine.org/civica/filebank/blobdload.asp?BlobID=32417
[25] Ibid
[26] https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/cloth-face-cover.html
[27] https://www.cdc.gov/coronavirus/2019-ncov/downloads/DIY-cloth-face-covering-instructions.pdf

Chemical-Resistant Gloves

Another strategy when handwashing and/or hand sanitizer is unavailable is to utilize clean chemical-resistant gloves when eating or drinking. In accordance with GSI EHS Program Manual and SS-HASP guidelines, disposable gloves are to be used on site when handling potentially impacted media. Therefore, chemical resistant gloves (e.g., latex or nitrile) or other disposable gloves should be readily available as PPE.

Respiratory Protection

GSI personnel are always allowed to utilize their GSI-issued respiratory PPE, even if not required for a specific job. As general practice, GSI work, including fieldwork, will not be performed in areas or with personnel of known infections. Therefore, respiratory protection such as air purifying respirators should not be required and/or provided unless other safety hazards require such PPE.

However, if deemed necessary, air purifying respirators with a particulate (purple) cartridge may be used to protect field personnel from airborne droplets. Cartridges must be disposed of after each use, and respirators must be disinfected after each use.

"Surgical" masks also are designed to provide minimum protection from nearby airborne droplets. However, they are not designed to pass a fit test as they do not form a tight fit and therefore should not be considered respiratory protection.

The use of respiratory protection must comply with state and federal regulations and GSI's Respiratory Protection Program, which includes fitness for use, proper training, fit testing, and use procedures.

Site-Specific Mitigation Measures

Specific job sites may require additional measures with regard to the pandemic outbreak. For example, practices such as temperature screening may be required for site entry. These site-specific measures should be detailed in the SS-HASP. Field staff that wish to opt out of site-specific screening will not be allowed on-site and should speak with the PTL prior to mobilization.

5.0 FIELD DOCUMENTS

The following additional documents should be kept with this Addendum, and supplemented as appropriate for project-specific work and for the pandemic outbreak at that time:

1. Executive Orders for the cities, counties, and/or states within which work is being conducted;
2. U.S. Department of Homeland Security, Advisory Memorandum on Identification of Essential Critical Infrastructure Workers During COVID-19 Response, 28 March 2020 (Version 2.0 Updated);
3. Copies of permits from county health care agencies or other permitting agencies;
4. Copies of orders or oversight agreements with regulatory agencies for the work being conducted (e.g., PFAS chrome plating or airport orders, oversight agreements with state and county agencies for environmental actions);[28]
5. Work Plans outlining the work being performed that reference regulatory directives and their associated agency approval letter, as applicable; and
6. GSI business cards.

[28] Also include copies of applicable notifications or regulatory updates such as the California State Water Resources Control Board, Compliance with Water Board Requirements During the Coronavirus 2019 (COVID-19) Emergency, March 20, 2020 (https://www.waterboards.ca.gov/resources/covid-19_updates/).

GSI personnel performing field activities should discuss talking points with the project PTL and PIC and identify key documents, such as those outlined above, to have available to demonstrate compliance with government orders and any prevention and mitigation measures recommended by CDC.

6.0 COMMUNICATION

All communications regarding amendments to the GSI Pandemic Disease Plan will be transmitted via email by GSI's Human Resource Manager (HRM), Rebecca Grant. The company HRM will maintain up-to-date lists of all key contacts, including phone numbers and email addresses for all GSI personnel (see GSI "Phone List"). In the event of an outbreak that impacts GSI's ability to perform its services, the HRM will facilitate external/customer communications, including notification when operations may resume.

All employee pandemic-related concerns and issues must be communicated directly to the company HRM. In addition, all employees must log in on their respective office-specific Outlook Calendars when visiting the office for any purpose or for any amount of time.

7.0 SUMMARY

This Addendum describes the potential hazards and safety measures related to infectious diseases during pandemic outbreaks that all GSI employees should understand and implement when working. The information described within this Addendum is meant to be used as guidelines to help GSI personnel implement office and field work safely and under federal and state regulations. As a company implementing essential services, GSI and its staff continue to hold safety paramount to any field activities. Additionally, it is important to note that the information on any infectious disease during a pandemic will evolve and procedures described in this addendum may be updated based on the best available information at that time.

The company HRM is responsible for creating, amending, and enforcing GSI's Pandemic Disease Plan. The company HRM will routinely review the GSI Pandemic Disease Plan and amend, as needed, to ensure compliance with local, state, and federal guidelines. Furthermore, following a pandemic event, the company HRM will identify "lessons learned" and implement any corrective actions, including, but not limited to, amending the GSI Pandemic Disease Plan. Any amendment to the GSI Pandemic Disease Plan will be immediately communicated to all employees via email by the company HRM.

Attachments

Attachment 1. GSI Plan for Return to Office Memorandum

GSI ENVIRONMENTAL

M E M O R A N D U M

TO: **Houston Staff**

FROM: **Management**

RE: **GSI Return to Work Plan-Updated**

We continue to be at ***High Risk*** for COVID infection and transmission. Please read the following guidelines for working in a GSI Office. Attached is GSI's Pandemic Disease Plan from our Employee Procedures Handbook and a checklist on minimum standard health protocols for office-based employees from the Texas Department of Health and Human Services.

As has been stated in prior email correspondence, working in the office remains entirely elective. GSI will provide masks, gloves, and hand sanitizer in all offices.

Those who choose to work in the office will need to strictly adhere to the following guidelines.

1. **Travel Restrictions:** Limit airplane travel to essential business. Upon return, please follow current CDC and state and local guidelines on the length of time to remain away from the office.
2. **Calendar Notice of Office Use:** Record your planned office visit (day and length of time) on the Outlook calendar for your office location, at least one day prior to your visit.
3. **Occupancy Limits:** For the time being, GSI will limit office occupancy based upon the 25% rule. Currently, both Texas and California are stating that "businesses located in office buildings may open but must limit their occupancy to the greater of 10 employees or 25% of their workforce." Based on the headcount of our offices, no more than 10 employees can be in these offices, at any given time. Priority will be given to those that have a particular need to be in the office that day.
4. **Self-Screen in Advance:** See check for symptoms on attached checklist. Check your temperature every day before coming to work. If you are exhibiting symptoms, do not come to the office.
5. **Entering the Building:** Wear masks in common areas of building, including lobbies, bathrooms and elevators. Do not use elevator with more than 4 people.
6. **Sanitize Upon Arrival at GSI:** Wash your hands as soon as you arrive at the office, using soap and water or sanitizing gel. Wipe down your work area before starting work. Cleaning and sanitizing supplies will be provided.
7. **Guests:** For the time being, we are not allowing guests in our offices. If an in-person client meeting is critical, prior approval from HR is required and guest(s) must complete a questionnaire and agree to follow the protocols we have in place for our offices.
8. **Safety During the Workday:**
   - Maintain 6 feet of separation from other co-workers
   - Wash hands frequently
   - Clean your work surface
   - Avoid shared workspaces (desks, offices, and cubicles) and work items (phones, computers, other work tools, and equipment) when possible.
   - If they must be shared, clean and disinfect shared workspaces and work items before and after use.
   - Wipe down commonly used equipment after use (copiers etc.).
   - Wear a mask in all common areas (elevators, restrooms, hallways, copy room, etc.)
   - Wear a mask if you share a cubicle wall with another employee who is also in the office.
   - **All** Conference Rooms and Kitchen: Limit occupancy to 1 person at a time and be sure to WIPE DOWN all areas that you have used.

GSI ENVIRONMENTAL

GSI Environmental Inc.
COVID-19 SCREENING QUESTIONNAIRE for Visitors

The safety of our employees and guests is our overriding priority. As the coronavirus (COVID-19) pandemic continues, we are monitoring the situation closely and following the guidance from the Centers for Disease Control and Prevention and local health authorities. In order to prevent the spread of the coronavirus and reduce the potential risk of exposure to our workforce, we are asking all visitors to GSI offices to complete and submit this questionnaire prior to entering the worksite. Please do not enter the worksite until your responses have been reviewed and your entry has been approved.

Please respond to each of the following questions truthfully and to the best of your ability. Your participation is important to help us take precautionary measures to protect you and our employees.

Name: _____ Company: _____

Title: _____ Cell: _____ Email: _____

Representations

1. **Are you currently experiencing, or have you experienced in the past 14 days, any of the following symptoms? (Please take your temperature before you answer this question.)**

   Yes ☐ No ☐ Fever (100.4° F/37.8° C or greater as measured by an oral thermometer)

   Yes ☐ No ☐ Cough

   Yes ☐ No ☐ Shortness of breath or difficulty breathing

   Yes ☐ No ☐ Sore throat

   Yes ☐ No ☐ New loss of taste or smell

   Yes ☐ No ☐ Chills

   Yes ☐ No ☐ Head or muscle aches

   Yes ☐ No ☐ Nausea, diarrhea, vomiting

2. **In the past 14 days, have you been in close proximity to anyone who was experiencing any of the above symptoms or has experienced any of the above symptoms since your contact?**

   Yes ☐ No ☐

GSI ENVIRONMENTAL

GSI Environmental Inc.
COVID-19 SCREENING QUESTIONNAIRE Visitors

3. **In the past 14 days, have you been in close proximity to anyone who has tested positive for COVID-19?**

   Yes ☐ No ☐

4. **Have you been tested for COVID-19 and are waiting to receive test results?**

   Yes ☐ No ☐

5. **Have you tested positive for COVID-19, or are you presumptively positive for COVID-19 based on your health care provider's assessment or your symptoms?**

   Yes ☐ No ☐

6. **In the past 14 days, have you been on a commercial flight or traveled outside of the United States?**

   Yes ☐ No ☐

7. **In the past 14 days, have you been in close proximity to anyone who has been on a commercial flight or traveled outside of the United States?**

   Yes ☐ No ☐

Certification

I hereby certify that the responses provided above are true and accurate to the best of my knowledge.

Signature: _____ Date: _____

Access to worksite: ☐ Approved ☐ Denied